# NRC Industrial Research Assistance Program (NRC-IRAP)

## Support for Innovative Businesses

**March 28-2013 - VIATEC**

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Industrial Technology Advisor (ITA)
Industrial Research Assistance Program
National Research Council Canada

# Who We Are

- Industrial Research Assistance Program (IRAP)
  - Part of NRC
  - Federal program
  - Regional offices across the country
  - Advisors in your community – close to your business

  - Three Advisors in Victoria and one in Nanaimo

NRC-IRAP

# Our Purpose

***We support small and medium-sized enterprises (SMEs) grow through technological innovation.***

NRC-IRAP

# What we do

*We assist firms to **develop, adopt and adapt technologies and incorporate them into competitive products** and services to be **commercialized** in the **global marketplace***

# 3 Services

- Innovation-related services
- NRC-IRAP network of organizations
- Strategic, competitive information
- Linkages with potential partners in Canada and abroad
- Financial support for hiring a recent graduate
- Financial support for innovation projects
- Financial Support for productivity improvement through adoption of digital technology

# Financial Contributions

- Innovation projects – R&D type - must involve some form of “R” or “D” or both
- Graduates – hiring recent young graduates (under 30 yrs.)
- Productivity Improvement - digital tech adoption (only adoption - no “R” or “D”)

# Boosting Canada's Productivity through Technology Adoption

Component of the Government of Canada's
## Digital Economy Strategy

**Purpose:**

To accelerate Information and Communications Technology (ICT) adoption and investment in Canada

**Delivery Method:**

To be delivered by IRAP and its team of Industrial Technology Advisors

**Timeline:**

**Three-year program**

**November 2011 to March 31, 2014**

DTAPP
Digital Technology Adoption Pilot Program

# DTAPP Objective

**Increase the productivity and competitiveness of SMEs across Canada through the adoption of digital technologies.**

Sherwood Innovations, Toronto, ON

DTAPP
Digital Technology Adoption Pilot Program

# DTAPP Program Components

**1. Support and accelerate the adoption of digital technologies**

Advisory services and financial assistance
Engage colleges and other organizations

**2. Improve understanding of the link between digital technologies and productivity**

Assess successes and failures in overcoming barriers to adoption
Derive lessons learned and best practices

**3. Raise awareness of the benefits and importance of adopting these technologies**

Raise awareness of DTAPP among SMEs, colleges and partners
Disseminate lessons learned and best practices to SMEs

DTAPP
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# DTAPP Delivery

**•IRAP Industrial Technology Advisors (ITAs) with specialized expertise:**

- provide advisory and diagnostic services to SMEs
- work with the client to assess the firm's current situation and identify risks to the successful adoption of digital technology and appropriate mitigating strategies
- work with the client throughout the adoption project to help ensure successful implementation
- measure the impact of digital technology adoption on the SME's productivity

# How DTAPP Supports SME Clients

## Depending on the plans and needs, IRAP supports DTAPP firms directly through advisory services and/or, funding.

IRAP ITAs can engage colleges, organizations, industry groups and businesses across the country that have the skills, programs, facilities and capacities to support DTAPP clients.

IRAP will leverage existing relationships (BDC, NSERC, and HRSDC) to facilitate the cross-referencing of potential clients across Canada.

Funding to firms can be provided to contract for expertise (contractors), facility use, testing or training.


DTAPP
Digital Technology Adoption Pilot Program

# How Colleges and Other Organizations Can Support Your Technology Adoption Plans

- Each DTAPP team of Industrial Technology Advisors (ITAs) has extensive relationships with colleges and organizations across the country that have the skills, programs, facilities and capacities to support DTAPP clients and their digital technology adoption plans.
- Depending on your plans and needs, the ITAs can refer your firm to colleges or organizations with the requisite capabilities.
- Funding can be provided to contract for:
    - Expertise
    - Facility use
    - Testing
    - Training
- Colleges are also a source of qualified graduates for hire.

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# Areas of Technology Included in DTAPP

**Design, Engineering and Virtual Manufacturing**

CAD, virtual manufacturing, simulation technologies, etc.

**Business Systems**

Electronic work order management, warehouse management systems, computerized maintenance management systems, etc.

**Plant Systems**

Robotics and automation, automated inspection, test & repair, human/machine interfaces, etc.

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# Areas of Technology Included in DTAPP

(continued)

**Information and Communications Technologies**

Inter-company networks, wireless communications for production, document imaging and management, etc.

**Other Digital Technologies**

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Digital Technology Adoption Pilot Program

# Examples of Digital Technologies

| Area | Examples | Flow Benefits | Cost Benefits |
|---|---|---|---|
| **Design and Engineering** | • CAD/CAM/CAE – Computer-Aided Design/Computer Aided Engineering eg. CATIA<br>• Simulation Technologies<br>• Project Management Software | • Reduced time to market<br>• Increased engineering capacity<br>• Increased quality | • Reduced labour<br>• Reduced re-work |
| **Enterprise Business Systems** | • ERP/MRP – Enterprise Resource Planning, Manufacturing Resource Planning<br>• Accounting systems<br>• Production Planning and Execution Systems<br>• Warehouse Management Systems | • Better information to make decisions<br>• Improved customer service<br>• Reduced delivery lead times | • Reduced labour<br>• Reduced errors |

# Examples of Digital Technologies (continued)

| Area | Examples | Flow Benefits | Cost Benefits |
|---|---|---|---|
| **Manufacturing Plant Systems** | • Robotics and Automation<br>• Manufacturing Execution Systems (MES)<br>• Automation Inspection / Vision Systems<br>• Human / Machine Interface (HMI) – eg. Bar Coding<br>• Preventative Maintenance Systems | • Increased quality<br>• Increased speed | • Reduced labour<br>• Reduced re-work<br>• Reduced cost<br>• Reduced errors |
| **Information & Communication Technologies** | • Internets and Intranets<br>• Wireless Communication Devices<br>• Document Imaging and Management<br>• Work Flow Collaboration | • Faster decisions<br>• Increased market size and awareness | • Reduced costs<br>• Reduced labour |
| **Sales Force Automation** | • Customer Relationship Management (CRM)<br>• Contact Management Systems | • More sales<br>• Higher “hit rate” | • Better use of time<br>• Reduced labour |

# 1 Eligibility

**Firms eligible for receiving IRAP services**

**If your company is:**

- For profit
- Located in Canada
- Incorporated
- 500 employees or less

***Your company is eligible for IRAP support***

# Firm Eligibility

## Firms eligible to participate in DTAPP are:

- Incorporated, for-profit companies,
- Willing to make necessary changes
- Operating in Canada
- 500 employees or fewer
- Growth-oriented SME and willing to engage with IRAP
- Willing to pursue digital technology adoption to improve productivity
- Willing to achieve productivity benefits from the adoption of digital technologies


Mentor Engineering, Calgary, AB

# Project Eligibility

- ***Once Your company is eligible for IRAP support***
- ***ITA will assess if your project is eligible***

- **An ITA will visit you at your location**

# Contact us

Three ITAs in Victoria

1. Gopal Gowda – 250 721 6503
2. Martyn Ward – 250 363 6909
3. Chris Taggart – 250 853 3848

# *Thank You*