



# NOVA CENTRIS

*FACILITATE OPEN INNOVATION  
AND ECONOMIC DEVELOPMENT*

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# TAKING ADVANTAGE OF OPEN INNOVATION



## *Context of new product/application development:*

- ❑ Projects are more and more complex and involved different technologies
- ❑ SMEs have few resources (HR and \$) and must focus on core business

Need to work with external resources and  
to collaborate with others

# TAKING ADVANTAGE OF CANADIAN R&D ECOSYSTEM

*An infinity of possibilities!*

The central graphic features a silhouette of a person standing on a cluster of colorful puzzle pieces. A large, bold red question mark is superimposed over the scene, pointing downwards. The background of the entire slide is a light orange color with vertical stripes and several orange circles of varying sizes on the left side.

Word cloud content includes:

- PAE Créneau Accord
- AMEQ RICQ MEDTEQ
- Industrie Canada
- Nano Québec Ecotech Défi Estri Mitacs
- Montréal CLD
- IRE
- Propriété
- international D.E.C. CDEG
- Intelligence
- OCEANOS CRDA
- Université
- Vallée élastomère Expé
- FRQC Oieote
- CNRG
- ADRIQ-RCTI
- Plasticompétence
- Entreprise
- PROMPT
- ACTE
- Innovation 02
- UQO
- MAPAQ
- CRSNG
- INO
- YUQ
- Québec
- international
- CRIAQ
- CLD
- Montréal
- PAI
- Vallée plasturgie
- Coefficienc
- Québec Investissement
- Québec
- QAM
- FRQS
- Sherbrooke
- Innopole
- U. Sherbrooke
- FRQNT
- MFE
- Innovation
- Polymère
- PARI-CNRG
- CEDEC
- CINQ

# FACILITATE OPEN INNOVATION AND ECONOMIC DEVELOPMENT



## *Taking Advantage of Open Innovation and Quebec Ecosystem*

YES, but:

- How to identify relevant expertise?
- How to think out of the box?
- How to transfer know-how to others?
  
- How to access relevant public services?
- How to optimize public funding for innovation?

# A NEW INITIATIVE IN QUEBEC NovaCentris. PLATFORM



**USING A MARKET PULL APPROACH  
TO ALIGN EXPERTISE AND SERVICES**



# HOW DOES NOVACENTRIS WORK?

Publish your technical challenges

NovaCentris  
Partners to  
mobilize/propose  
solution providers

Receive solutions

Analyse and Contact partners

NovaCentris  
Partners to  
mobilize/propose  
service providers

Define your collaborative projects

NovaCentris Partners  
to mobilize/propose  
public funding

Finance your project

- Free , Anonymous and non confidential
- Challenge on 1 page : context, problem, constraint, time frame
- Sharing on the web and through huge partners network (universities, CCTT, companies, consultant)...here and abroad!
- Private electronic transfer of solutions
- Selection of partners by the company
- Services supporting innovation management: IP, technical analysis, market analysis, Social impact
- Funding avenues depending of the project characteristics.  
ex: NSERC, IRAP, Mitacs, etc.

## NOVACENTRIS RESULTS AFTER 18 months



- ❑ 16 key partners supporting NovaCentris initiative
- ❑ +95 companies using the platform
- ❑ +155 industrial challenges released (all sectors)
- ❑ 80% of SMEs (less than 25 employees)
- ❑ 3 to 4 solutions received per challenge
- ❑ 80% projects launched after matching
- ❑ + \$12M invested by the financial partners

NovaCentris. ▾
FRANÇAIS

**NOVACENTRIS SECTIONS**

CHALLENGES ▾ | ABOUT ▾ | CONTACT

## LIST OF ALL THE CHALLENGES

We invite you to propose cutting-edge avenues for solution that will foster the development of products and processes allowing our companies to consolidate their leadership.

You will find in the list below all the challenges posted on the NovaCentris portal (search across all the NovaCentris sections).

All disciplines ▾
All Challenges ▾

TEXTILE
SEARCH

[Download list \(PDF\)](#)

**Electronic structures adapted to textile and garment integration**  
Section: iNANO

[Download pdf](#) | [Send to a friend](#) | [Add to favorites](#)

The company views the microfabrication of nanoscale textile-specific electronics as key to the growing industry needs of electronics implementation into soft and body-worn "wearable" electronics [See more](#)

Challenge number :	33317	Opening Date :	2012-05-02
Status :	Solution Analysis	Closing Date :	2012-06-21

**Préservation des couleurs dans le textile**  
Section: iNANO

[Download pdf](#) | [Send to a friend](#) | [Add to favorites](#)

Dans le cadre de ce projet, la société souhaite développer un apprêt écologique et d'origine organique pour la préservation des couleurs – sans utiliser de métaux – en utilisant par ex [See more](#)

Challenge number :	92429	Opening Date :	2012-05-02
Status :	Closed	Closing Date :	2012-06-21

**Development of an intelligent fiber that has the capabilities to detect the presence of blood in a wounded person**  
Section: iNANO

Transparent, conductive layers, solar cells, and gas sensors. [SEE TITLE](#)

**WE SUGGEST**

- [Optimisation de la Structure du PARABRIS](#)
- [Développement d'un capteur de débit pouvant fonctionner en régime gazeux ou en régime liquide](#)
- [Embellir le polypropylène \(PP\)](#)
- [Contrôle des vibrations et grippage sur les véhicules ferroviaires dans les courbes](#)
- [Conception of a formulation to reduce high levels of salt in water in drilling pits](#)

**YOUR FAVORITES** ★

You have no favorites yet

**CONTACT US** ✉

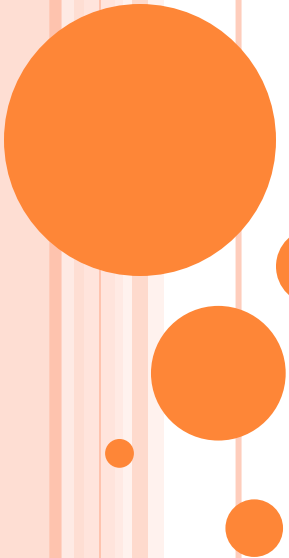
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[See all our contact details](#)

**LOG IN BELOW** 🔒

Your email address





# NovaCentris and Textile industry

## Examples of challenges:

- To protect a 100% polyester knit against dirt (mud) and water intrusion
- Development of a textile that can develop a negative charge easily
- Electronic structures adapted to textile and garment integration
- Textile anti-rayonnement fabriqué à partir de nanocellulose
- Development of an intelligent fiber that has the capabilities to detect the presence of blood in a wounded person
- Enhancement of oxygen barrier of polyethylene composite in film form
- Prevent Shrinkage of geosynthetic clay liner (GCL) during wet/dry cycles
- Application de traitements superhydrophobes pour utilisation extérieure
- Amélioration de propriétés barrières et de protection contre les radiations (textile)
- Préservation des couleurs dans le textile

# NovaCentris and Textile industry

## Development of an intelligent fiber that has the capabilities to detect the presence of blood in a wounded person

Challenge number :	70430	Opening Date :	2012-05-02
Status :	Ongoing Solving	Closing Date :	2012-06-21

### CONTEXT

The company is the leader manufacturer and distributor of industrial sewing threads worldwide.

The most important products in the domestic and international markets are the fire retardant threads such as Nomex® and Kevlar® which are sold to manufacturers of uniforms for first responders (Police, Firefighting and Emergency) as well as the military.

Taking that into consideration, the company is determined to develop a unique technology that can be beneficial for these institutions.

### DESCRIPTION OF THE CHALLENGE

In many situations chances are that a soldier, police officer or firefighter gets wounded in his line of duty and he is incapable of communicating his health condition because he is in pain and incapable of moving.

Therefore, this technology will allow the quick transmission of a signal to a military base, police station or a fire department informing that the person is injured as soon as his blood gets in contact with the intelligent fiber.

This smart thread will be sewn in a military, police or firefighting uniform and would have the capabilities to transmit a signal to a specific location when it's in contact with blood.

To develop an innovative and unique product that could save lives of first responders by informing to a base the precise moment that he is injured and his right location for a fast rescue.

### CONSTRAINT(S)

The following are the main restrictions and uncertainties for the project:

1. The adherence or bonding efficiency of the nano-particles into the fiber after a washing and drying process to the uniform.
2. The nano-particles needs to have a specific tension, absorption, shape and for proper chemical bonding with the textile fiber.
3. The quantity and quality of surfactant for appropriate dispersion of nano-particles.
4. If the chemical reaction with the blood would generate a reasonable amount of electricity to provide a good signal for wireless transmission to a base. The intelligent fiber should be health safe.
- 5.



[SUBMIT A SOLUTION](#)

**34 Solutions from:**

- Universities
- CCTT
- Compagnies

**75% of project with good matching**

**50% of project already started**

# NOVACENTRIS

*FACILITATE OPEN INNOVATION  
AND ECONOMIC  
DEVELOPMENT*

- **Open innovation: A reality!**
  - Companies willing to share problems
  - State-of-the art solution provider community
  
- **Ecosystem of innovation intending to work together to simplify innovation process for companies**
  - Funding
  - Support such as IP, technical or market assistance, etc.
  
- **Let's start together!**
  - Submit Challenges on the platform
  - Propose your expertise to solve problems
  - Subscribe for free and receive alerts

The screenshot shows the NovaCentris website interface. At the top, there are logos for various partners including nano québec, QUÉBEC INTERNATIONAL, écotech Québec, INNOVATION POLYMÈRES, Développement Supérieur Québec, Développement Économique Canada, Canada Économique Développement for Québec Regions, NSERC CRSNG, and CIBC-ABC. Below these are logos for CONSORTIUM INNOVÉ, ADICQ (QSS - 2013 Edition), INANO (QSS - Mines Edition), CEA AEC, innovation 02, Réseau Trans-tech, INANO (4 active challenges - 116 challenges), Mitacs, EN MODE SOLUTIONS (Innovation Polymères), and ADRIQ (Réseau conseil en technologie). A navigation bar includes CHALLENGES, ABOUT, and CONTACT. The main content area is titled "LIST OF ALL THE CHALLENGES" and includes an invitation to propose solutions and a list of challenge titles such as "Optimisation de la Structure du PARABRIS", "Développement d'un capteur de débit pouvant fonctionner en régime gazeux ou en régime liquide", and "Embellir le polypropylène (PP)".

**THANK YOU!**

The screenshot shows a detailed view of a challenge. It includes a "Download list (PDF)" link, the challenge title "Electronic structures adapted to textile and garment integration", and the section "iNANO". Below the title are links for "Download pdf", "Send to a friend", and "Add to favorites". A short description follows, along with a "See more" link. A table provides details: Challenge number 33317, Opening Date 2012-05-02, Status Solution Analysis, and Closing Date 2012-06-21. The next challenge is "Préservation des couleurs dans le textile" (Section: iNANO), with a description in French and a "See more" link. Its details are: Challenge number 92429, Opening Date 2012-05-02, Status Closed, and Closing Date 2012-06-21. The third challenge is "Development of an intelligent fiber that has the capabilities to detect the presence of blood in a wounded person" (Section: iNANO). On the right side, there is a "YOUR FAVORITES" section (empty), a "CONTACT US" section with contact information for Benoit Balmana, and a "LOG IN BELOW" section with a password field.