

# **CPEIA Semi-annual Report**

## **Six months ending March 31 2015**

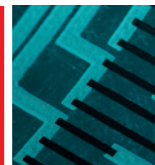
**The Canadian Printable Electronics Industry Association (CPEIA)  
is your point of entry into this exciting new technology area.**

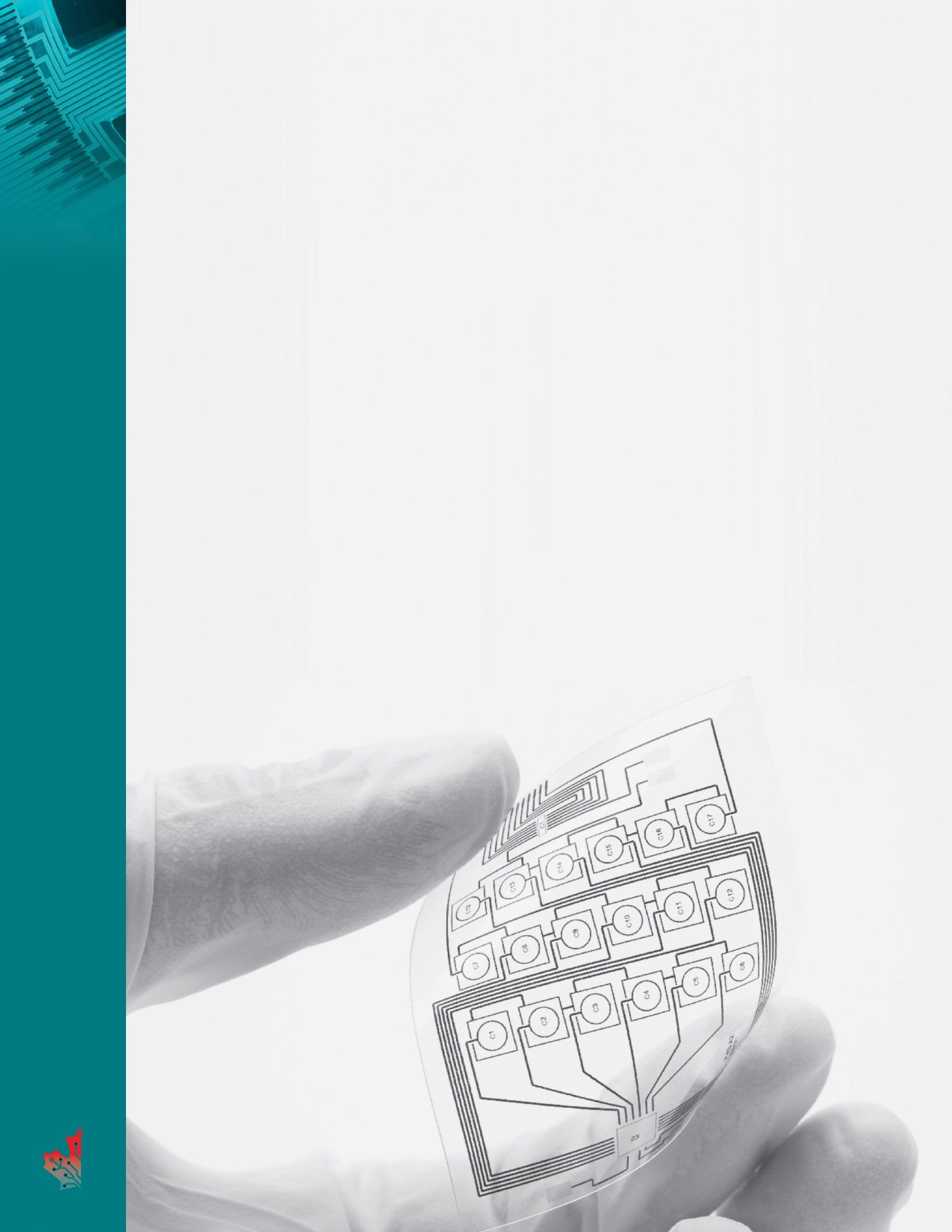


**Peter Kallai, MBA, PMP**  
**Executive Director**  
**April 21, 2015**



**The united voice of Canada's  
Printable Electronics sector**





## Milestones achieved as of March 31, 2015

- 50** Members: Public and private sector organizations from Canada and abroad that are active in various aspects of research, development, manufacturing and commercialization for Printable and Organic Electronics in various industry verticals

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- 3** Strategic Partnerships

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- 15+** Press releases and Membership announcements

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- 30+** Pieces of media coverage, with 13+ Canadian, U.S. and international industry and business publications

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- 20** Industry groups engaged through LinkedIn

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- 11** Partner/Members highlighted through media relations efforts and press releases

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- 4** Issues of newsletter published, with higher-than-industry-average open rates, according to Google Analytics

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- 130** Attendees, 9 corporate and 3 media sponsorships and in-kind contributions has made CPES2015 a sold-out success



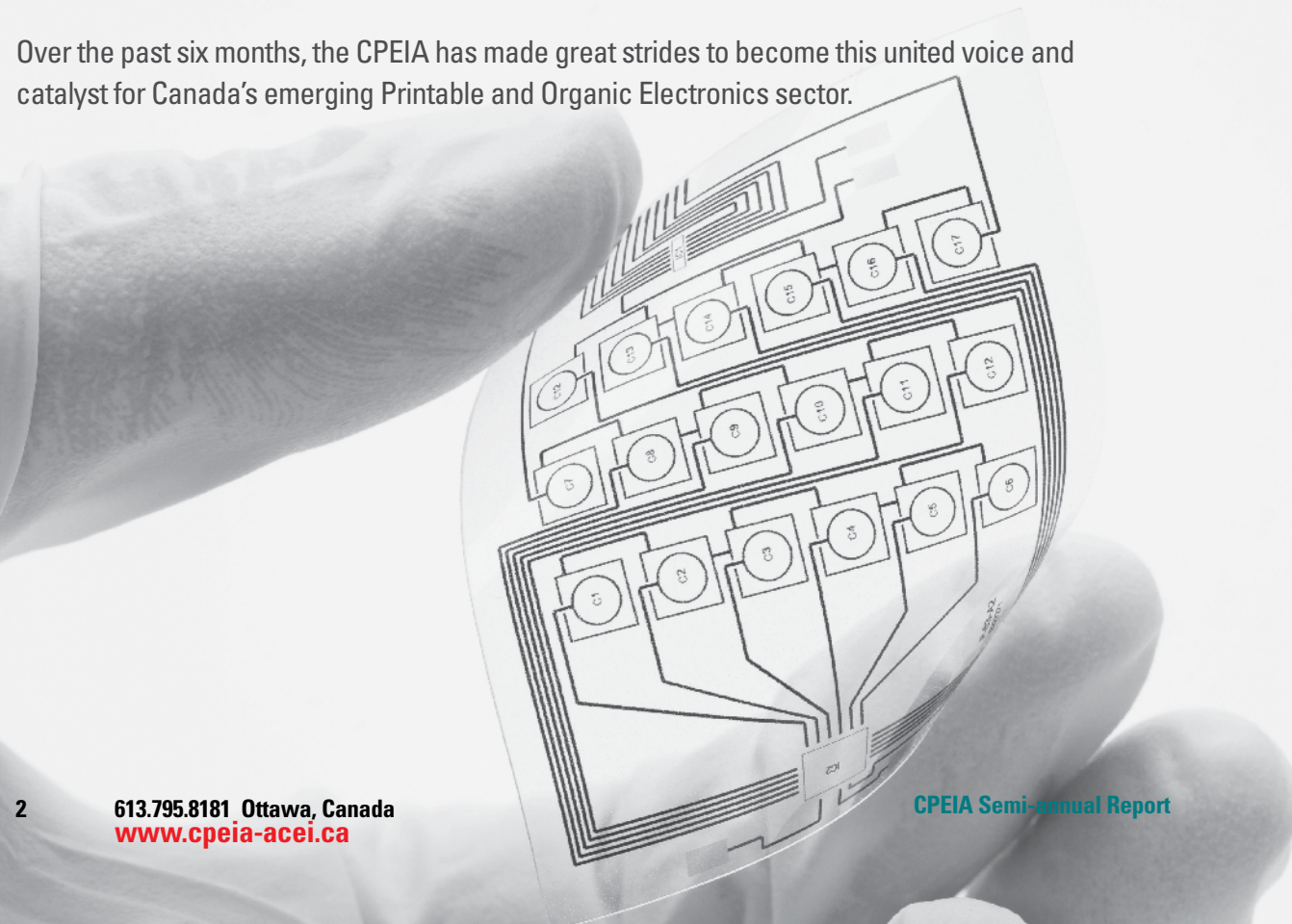
## Introduction

In the fall of last year, we launched the Canadian Printable Electronics Industry Association, the CPEIA.

**Our goal from the outset was to create a non-profit association that would bring together key Canadian and international players in industry, academia and government to build a strong Printable and Organic Electronics technology sector in this country.**

The CPEIA's mandate would be to implement critical development strategies to facilitate growth through networking, stimulate R&D and investment, build a strong Printable and Organic Electronics supply chain and drive the broad adoption of Printable and Organic Electronics by end customers in a range of Canadian industries. These include Packaging, Aerospace and Defence, Automotive, Health and Wellness, Secure Printing, Marketing and Commerce, and Consumer Electronics and Wearables.

Over the past six months, the CPEIA has made great strides to become this united voice and catalyst for Canada's emerging Printable and Organic Electronics sector.



## First Quarter: October to December 2014

After several years of consultation work and business planning between the National Research Council of Canada, members of Canada's Printable Electronics Consortium and senior high-tech consultant Peter Kallai, the CPEIA launched with Kallai serving as its first founding Executive Director.

### Core team and messaging

The initial focus was on assembling a qualified core team that included a Director of Marketing and Communications, and a Web Master and Brand Manager.

Through October and November, this team worked to develop core messaging for the CPEIA; design, develop and launch its website; and create the marketing materials necessary to begin the process of building our Membership.

### Governance

The administrative and governance mechanisms for the CPEIA were also established at this time, to ensure accountability and transparency, and prudent spending of every dollar in the CPEIA's budget. We hired legal and accounting expertise accustomed to working with non-profits, and established financial systems and controls, including online payment and tracking.

### Printed Electronics USA

The CPEIA had its official coming out in late November, when it joined and promoted a Canadian delegation led by the NRC that exhibited at one of the largest international industry events of its kind, the 2014 Printed Electronics USA conference in Santa Clara, CA.

This proved to be a fruitful endeavor. We secured our first national and international Members.

### Outreach, promotion and CPES

Our launch phase included social media, and a targeted media relations campaign aimed at key industry and business publications in Canada and the U.S. This yielded early media coverage to support marketing and Membership drive efforts. At the same time, we engaged with other



Canadian industry associations that represent end-users in the CPEIA's target market verticals to introduce the CPEIA and explore possible strategic partnerships.

The CPEIA also assumed a leadership role as chair of Canada's only dedicated industry event, the annual Canadian Printable Electronics Symposium (CPES2015).

In December, the CPEIA launched its first monthly newsletter, to keep Members apprised of new developments, recent news in the industry, and to provide them with a channel through which to promote business opportunities and job openings to their fellow Members.

## Funding

CPEIA manage to secure limited startup funds from two founding Members, the NRC and the Xerox Research Centre of Canada, but the lion's share of startup funding was covered by Peter Kallai, Executive Director.

## Second Quarter: January to March 2015

By early January, the CPEIA's Executive Director had secured 32 Founding Members. Our focus turned to planning and preparation for CPES2015, with the goal of reposition this event from a small technical meeting to a professionally organized, widely promoted event expected to double in size from its previous two years.

### The drive to CPES2015

We developed and launched a dedicated CPES website and drove the effort, in cooperation with CPES's organizing committee, to create the program, secure speakers and keynotes, and sign up sponsors and media partners.

Major contributions of resources and staff support were received from the CPES organizing committee, which included NRC, ICI, CMC Microsystems and Laval University. Of particular note has been the support of; **Peter Kallai**, Executive Director, Canadian Printable Electronics Industry Association - Chair, **Thomas Ducellier**, Executive Director, Printed Electronics Flagship Program, National Research Council of Canada – Co-Chair, **Andre Dion**, Director General, Printability and Graphics Communications Institute (ICI) - Co-Chair, **Brent Jodoin**, Business Development Manager, CMC Microsystems, **Mario Leclerc**, Professor, Laval University.

We secured nine title sponsors (total value \$28,500), along with three media partners that made in-kind contributions, through the help of our Organizing Committee we were able to secure five international keynotes and more than 30 speakers in all. Attendance sold out at 130.

### Media coverage

As part of those media partnerships, we secured prominent and substantial editorial and advertising coverage that reached hundreds of thousands of leading innovators and decision makers across the PE ecosystem, the broader technology industry and key market verticals of interest to the CPEIA.

This included Canadian Manufacturers & Exporters' 20/20 Magazine (a two-page spread), leading Canadian industry publication Electronic Products & Technology and international publication +Plastic Electronics. This was in addition to earned editorial coverage by other Canadian and international industry and business publications such as Graphic Arts Magazine, IT World Canada and Printed Electronics Now.

Eleven Partner/Member organizations have to date been highlighted through media relations efforts and press releases. These include the NRC, IDTechEx, FUJIFILM Dimatix, NovaCentrix, Raymor Industries, ICI, Jones Packaging, Canadian Manufacturers & Exporters, CABA, Xerox Research Centre Canada and OMSignal.

We also levered our team's LinkedIn networks, to promote the Association and CPES to 20 relevant industry groups.



**Intelligent Buildings** **Smart Sensors** **Wearables** **Secure Documents** **Intelligent Labels** **Smart Parts**

## Printable electronics A world of possibilities

**Why printable electronics matters to Canadian product companies**

- Consider the following:
  - Windows that can block Wi-Fi signals, or harvest solar energy to produce electricity.
  - Intelligent packaging that can wirelessly communicate product information to consumers, update its own shipping status, and monitor environmental conditions.
  - Aircraft and automobiles that no longer require traditional silicon-based electronics and bulky wiring for their subsystems.
  - Fabrics with embedded flexible components that can monitor vital signs, or even provide battery power for mobile devices.

All of this and more is possible with printable electronics, or PE. PE gives manufacturers and product companies the means to increase their competitive edge and reduce costs, with new applications and alternatives to traditional electronic components. It includes organic, flexible and wearable electronics.

**What is printable electronics?**

PE combines new materials with cost-effective, large area production processes. Conventional printing processes, such as screen printing, offset lithography and inkjet, are used to deposit conductive inks onto a variety of flexible substrates, such as plastics, papers and fabrics.

The result is a whole new world of electronics that are low cost and consume little power. They can be disposable, biodegradable and even stretchable – attributes that defy the limitations of traditional rigid components.

PE-enabled products are already around us. These include the biosensors in the disposable glucose test strips used by diabetes patients, the embedded antennas in mobile devices, and the touch displays on the consumer appliances and devices we use every day.

**The challenge for manufacturers and product companies**

According to market research firm IDTechEx, the global market for printed and potentially printable electronics, including organics, inorganics and composites, will rise from about US\$24 billion in 2014 to \$70.4 billion in 2024, with a compound annual growth rate of 40 per cent.

PE lies at the convergence of several industries in which Canada has a strong track record – advanced materials, microelectronics, information and communications technologies, printing and advanced manufacturing.

But key challenges remain to develop new materials, microcircuits, manufacturing equipment and processes, and information systems that connect PE-enabled devices or objects, to realize the full potential of PE.

**Sharpen your competitive edge. Accelerate time to market. Cut costs.**

**The 2015 Canadian Printable Electronics Symposium**

The CPEIA has taken the reins of Canada's only dedicated PE industry event. The 2015 Canadian Printable Electronics Symposium (CPES2015) will take place April 21-22 in Montreal.

Over two information-packed days, 120+ attendees will have the opportunity to learn, network and develop partnerships for collaboration and business development.

The agenda includes five keynote presentations, 30 in-depth presentations by industry experts and leading Canadian researchers, two panel sessions with representatives from Canadian industry and funding organizations, and 15 academic posters from leading Canadian principal investigators and their teams.

"This is the place for Canadian manufacturers and product companies to find out how they can harness the power of PE to open up new markets and drive new revenue," said Kallia, "It's not only an opportunity to learn, but also make business happen."

To learn more about CPES2015 or to register, please visit [www.cpeia-acei.ca/symposium](http://www.cpeia-acei.ca/symposium)

**70+ public and private sector organizations in Canada are already engaged with printable electronics, to bring new products and applications to market.**

**The Canadian Printable Electronics Industry Association (CPEIA) is your point of entry into this exciting new technology area.**

Learn more at [www.cpeia-acei.ca](http://www.cpeia-acei.ca)

**To learn more about PE and its applications, please download our free whitepaper, Printable Electronics: Canada's Opportunity, at [www.cpeia-acei.ca/whitepaper](http://www.cpeia-acei.ca/whitepaper)**

**The role of Canada's printable electronics association**

"The global market opportunity for Canada in PE today is much like the photonics industry in the 1980s," said Peter Kallia, Executive Director of the Canadian Printable Electronics Industry Association (CPEIA). "Canada can stake a commanding claim in this new growth industry, but the participation of our manufacturing sector and product companies is key."

The CPEIA launched last fall with the support of the National Research Council of Canada and other PE stakeholders. It already has almost 40 members.

The CPEIA's mandate is to serve as the hub and catalyst for cooperation and collaboration, between the creators and end users of technology, and other stakeholder groups that can support R&D and commercialization, to build a strong and globally competitive Canadian PE sector.

**CANADIAN PRINTABLE ELECTRONICS SYMPOSIUM 2015** Engage with Canada's PE industry at CPES2015 in Montreal, April 21-22. Visit [www.cpeia-acei.ca/symposium](http://www.cpeia-acei.ca/symposium) to learn more.

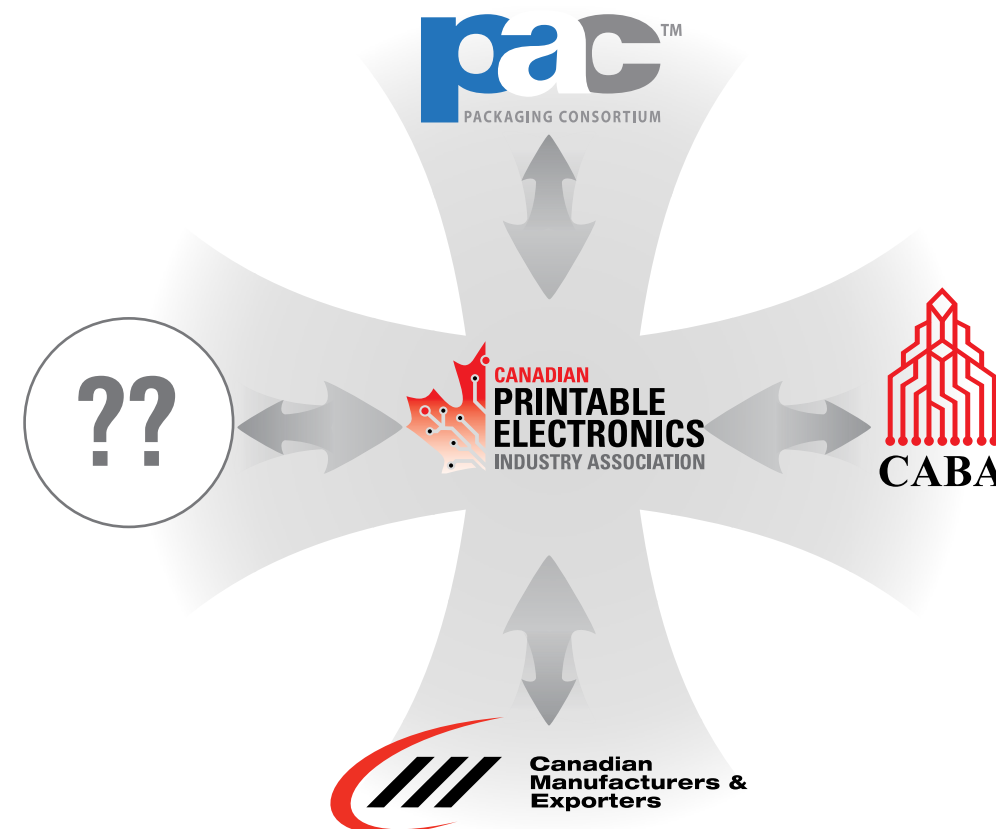
## Forging strategic partnerships

Memorandums of Understanding were signed with Canadian Manufacturers & Exporters, the Continental Automated Buildings Association (CABA) and, just after quarter's end, with PAC, Packaging Consortium. The members of these organizations are key end user groups that may have an interest in trialing and adopting PE-based applications.

The CPEIA continued to pursue long-term strategic relationships with other key Canadian industry associations with strong common interests: the Canadian Marketing Association, the Canadian Packaging Industry Association, the CSA Group and Canadian medical equipment association MEDEC.

We also had exploratory talks with other associations that either declined, or were unsuited for, a long-term relationship due to their mandate being primarily regulatory, or a lack of resources.

On other fronts, we are at early stages of exploring further relationships with such organizations as Ontario Centres of Excellence, Wavefront Wireless and the IEEE.





strategic partner



strategic partner



strategic partner

## Driving research and commercialization

The CPEIA was also involved in several R&D funding Letter of Intent submissions to government to establish R&D and commercialization centres that either exclusively focus on PE or include a PE component.

We also laid the groundwork to create working groups and advisory boards to develop white papers and facilitate networking and collaboration across the Canadian industry. We will build on these efforts next quarter with our new Board of Directors and Board of Advisors.

The Membership drive continued, too. We achieved our goal to reach 50 Members by CPES2015, meeting our Executive Director's personal stretch goal. We received several good referrals from our Members that resulted in new memberships.

### Full Members

Caledon Controls  
 Canadian Bank Note Co. Ltd.  
 ClickTouch America Inc.  
 Cooledge Lighting Inc.  
 E. I. du Pont Canada Co.  
 EPIC Semiconductors  
 GGI International  
 Group NanoXplore Inc.  
 Jones Packaging  
 Memtronik Innovations  
 MW Canada Ltd.  
 Netpak Packaging  
 Raymor Industries Inc.  
 RFID Canada  
 Tangio Printed Electronics  
 Tekna Advanced Materials  
 Xerox Research Centre of Canada  
 Zeno Technologies

### Associate Members (Organizations)

Anderson Vreeland Canada  
 ArjoWiggins Creative Papers  
 Bank of Canada  
 Canadian Manufacturers & Exporters  
 CMC Microsystems  
 Communications Research Centre Canada  
 Continental Automated Buildings Assoc.  
 CSA Group  
 FPI Innovations  
 FUJIFILM Dimatix, Inc.  
 Go 2 Scout 4 R&T  
 Hot Tub Interactive  
 ICI  
 IDTechEx  
 INO-Institut National Optique  
 Keystep Growth & Finance  
 Laval University  
 McGill University  
 National Research Council of Canada  
 NovaCentrix  
 Ontario Centres of Excellence  
 PAC, Packaging Consortium

Quebec Centre for Functional Materials  
 Service Optiprint Inc.  
 Universite du Quebec a Montreal  
 University of Alberta  
 University of Western Ontario  
 Xenon

### Associate Members (Individuals)

Cameron Cormack  
 Lida Ramezani  
 Raiden Andres Cobas Acosta  
 Sam Wong  
 Steven Holdcroft  
 Tom Ewart



membership

## Priorities through 2015

Following the installation of the CPEIA's Board of Directors at the AGM on April 21, the CPEIA will continue to build on the momentum achieved in its first six months.

### Budget concerns

Several initiatives are already underway to ensure the CPEIA can generate the resources and revenue it requires to operate on a break-even basis.

With the high startup expenses incurred to date, we expect to break even for the CPEIA and CPES2015. We must, however, generate additional revenues for the remainder of the year and for additional investments in marketing and business development.

Because all government programs will require CPEIA to co-fund activities, we must have funds available to lever such programs.

### New revenue generation

We engaged in Q2 with an Executive MBA team from the University of Ottawa to examine new revenue generation activities. This became necessary because our startup business plan was developed around NRC launching the CPEIA within its organizations, but this was changed due to NRC's legal limitations. The EMBA team is examining four revenue generation strategies and will provide recommendations to the CPEIA by late April 2015.

As an example, one of the four strategies is to monetize our current CPEIA website and newsletter. This would involve the CPEIA offering web-based advertising and marketing services to our Members.

Another important strategy (a fifth strategy) for revenue generation has been developed internally within CPEIA. This would entail highly focused access to each vertical target market and the execution of a "go-to-market" program that will result in trialing new PE-based solutions within each target market. This would be a "pay-per-play" service for select non-competing firms interested in pooling their marketing resources through the CPEIA. This approach is being used by other associations such as PAC Packaging Consortium and CABA, resulting in very focused activities for the benefit of Members.

These strategies will be reviewed by the Board of Directors and executed upon if found to be consistent and appropriate for the CPEIA. We expect that certain strategies may include further consultation with all of our Members prior to implementation.

### Strategic partners

The CPEIA will continue to pursue formal strategic partnerships with fellow industry associations that can help us build relationships with end users in our target market verticals.

We will pursue informal links with other international Printable and Organic Electronics organizations, such as the Organic and Printed Electronics Association (OE-A) and the Korean Printed Electronics Association (KoPEA).

### Achieving critical mass

Through the formation of working groups and advisory boards, we will endeavor to explore the full potential of Printable and Organic Electronics, and build the linkages between researchers, innovators, manufacturers and end users to bring compelling new products and applications to market.

Our strategy is clear, but we need the additional horsepower that comes of active involvement by our Membership. We need your help to grow exponentially the efforts of our core team.

Together, we will achieve the critical mass to generate hundreds of millions of dollars worth of new economic activity, create jobs and strengthen the Made in Canada brand abroad.

**Peter Kallai, MBA, PMP**

Executive Director

April 15, 2015



