

# intelliFLEX

INNOVATION ALLIANCE

## Enabling the Internet of *Everything*

Printable, flexible and hybrid electronics (FHE) have the power to add intelligence to and connect ordinary objects economically



## Scaling up the Flexible and Hybrid Electronics Sector

intelliFLEX

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# Canada's Opportunity

Canada's industrial and academic communities have the capabilities and the opportunity to seize a sizeable share of the global FHE market. But this requires fresh thinking and a new approach.

*"The market for printed and flexible electronics is set to reach over US\$73 billion by 2025."*

– Raghu Das, CEO, IDTechEx

*"Worldwide Internet of Things spending will reach US\$1.1 trillion in 2021."*

– IDC Worldwide Semi-annual Internet of Things Spending Guide

*"When you need to scale to the billions of units, or the tens of billions ... you have to find ways of extending electronics to large areas and be able to scale cost effectively."*

– Davor Sutija, Thin Film Electronics



## Where do you fit?

This country's traditional electronics design, development and manufacturing sector has some **2,000 firms** that generate about **\$25 billion** in annual economic activity. FHE represents a new competitive edge to overcome the challenges they face in a globalized economy. They can take advantage of new additive manufacturing processes, fast prototyping tools, 3D printable electronics to print PCBs and new conductive materials that are environmentally friendly.

Meanwhile, industries once outside the electronics sector – such as packaging, retail, textiles and documents – are now considering how FHE can help them prosper in the Internet of Things. They need partners to revolutionize existing products and applications, or create new ones, with added intelligence and functionality. This represents a substantial growth opportunity for electronics companies.

More than **300 organizations** across Canada already work in the FHE ecosystem to enable the Internet of Everything. They need partners and customers willing to shake up traditional supply chains and break down industry silos to commercialize new high-value FHE products and applications.

The Canadian marketplace already boasts more than **100 FHE-enabled** products and applications. These span a dozen Canadian industries, including consumer electronics, packaging, retail, building automation, automotive, defence and aerospace. FHE has proven to be the gamechanger – it delivers functionality, connectivity, and data-driven insight that is simply not possible with conventional electronics.

## Who we reach

Our network provides the “one-stop-shop” for any organization, of any size, to capitalize on new opportunities with FHE.

Our growing global membership spans flexible, 3D printable electronics, 2D large area printable electronics, wearable electronics, smart textiles and hybrid electronics including related semiconductors, integrated circuits and software.

Our programs accelerate the adoption of these innovations among end users in verticals that include Smart Packaging and Retail, Intelligent Buildings and Connected Homes, Aerospace and Defence, Automotive and Industrial Applications, Health and Wellness, Intelligent Documents and Wearables.

Regardless of your industry segment, if you are an end-user or tech developer, an integrator or academic researcher, we invite you to get involved with intelliFLEX.

## Who we are

Regardless of where your organization fits into this equation, intelliFLEX is your partner, advocate and catalyst for growth in FHE.

About two-thirds of our members are industrial companies – from startups to multinationals. They are creators, integrators and end users of FHE-enabled products and applications. We also welcome membership from academic organizations, government R&D organizations and others that support commercialization.

*“In a few short years, intelliFLEX has grown to become Canada’s launch pad for domestic firms to gain traction in global markets with our end-use market focus, thought leadership, networking and matchmaking events, to build specialized supply chains. We were proud to see our members take three of the six awards up for grabs at the 2017 Printed Electronics USA conference in Santa Clara – a Canadian first.”*

- Peter Kallai, President and CEO, intelliFLEX



# We help members develop new products and commercialize

- Access end users, development partners and suppliers, and market research
- Create leadership councils for intelligent packaging, smart textiles and wearables, automotive and industrial, and intelligent buildings and connected homes, to build expertise and grow supply chains
- Access our Knowledge Base of over 300 articles and publications: white papers, presentations, use cases, application notes
- Develop new product training programs, testing and field trials assistance
- Access prototyping facilities, facility tours

*"The intelliFLEX community has provided NanoXplore with great opportunities for informal and early-stage discussions with world-class researchers and marquee industrial brands. This has helped us to quickly screen and validate our roadmaps and sharpen product focus."*

- Paul Higgins, COO of **NanoXplore**, an established mid-sized company

*"The exposure we received through intelliFLEX as the winner of its First Startup of the Year Award in 2017 opened doors with multinational materials companies, helped us to introduce our product to the flexible electronics industry and land seed financing."*

- Dr. Hadi Hosseinzadeh Khaligh, Founder and CEO of **NanoCnet**



# We help members secure expansion capital

*"intelliFLEX plays a vital role in spearheading and accelerating the broad adoption of FHE technologies in many manufacturing supply chains. With the Advanced Manufacturing Supercluster, intelliFLEX will play a significant role in helping its members establish collaboration opportunities with key organizations and innovators to ensure a prosperous future for advanced manufacturing in Canada."*

- Paul Smith, Vice-President of multinational company **Xerox Innovation Group**, and Board Chair of **intelliFLEX**

- Track sector investment in \$100 Million Investment Challenge
- Provide assistance to access government funding programs
- Promote participation in CPES Funding Panel
- Facilitate personal introductions through Investor Connect
- Provide Business Plan Review
- Mentor Startups

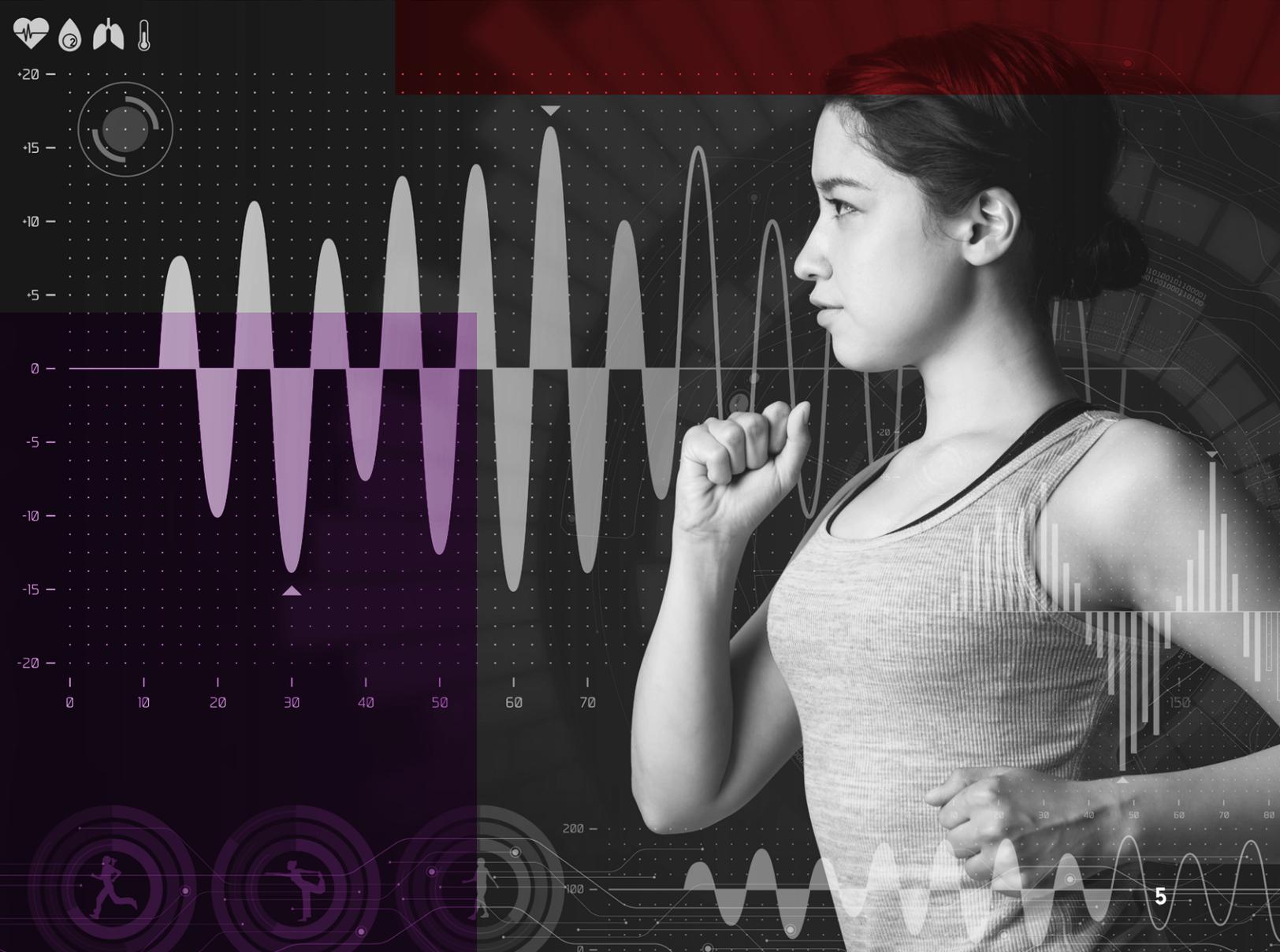


# We help members scale manufacturing

- Develop Advanced Manufacturing & Product Development Program
- Provide access to facilities, contract manufacturers through tours and open houses
- Facilitate personal introductions through Member Connect and Supplier Connect
- Host CPES conference with dedicated manufacturing day
- Develop FHE Manufacturing Institute (in development)
- Create Smart Textile & Wearables Manufacturing Institute (in development)

*"intelliFLEX is well positioned to play an important role by supporting the development of standards, connecting people and companies, and helping develop training curriculums relevant to members. This work is an integral element in the development of a resilient and sustainable sector."*

- Ilaria Varoli, Executive Vice-President of **Myant**, a growth-stage SME

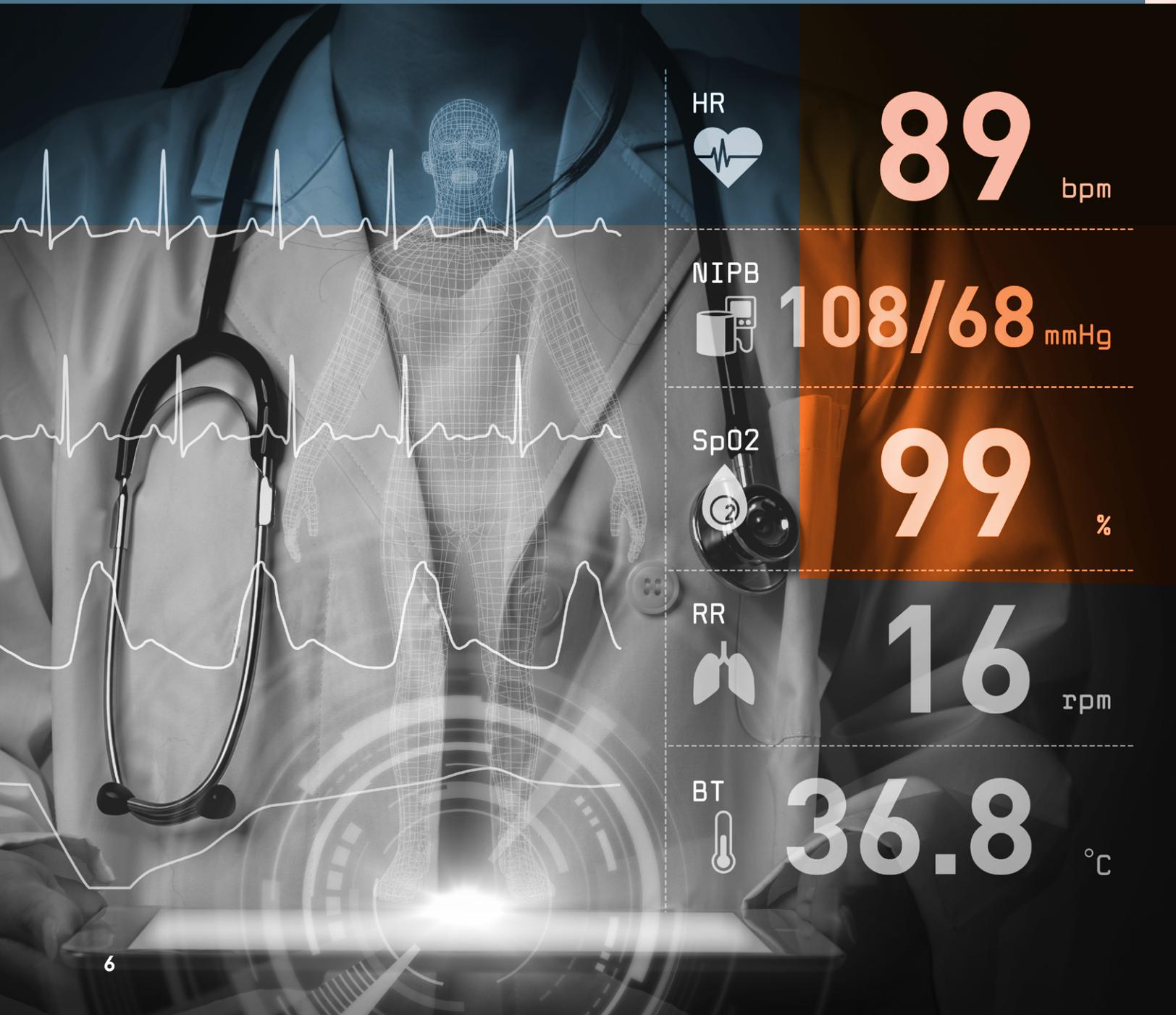


# We help members access global markets

*"Because of our participation with the various IntelliFLEX meetings and events, GGI Solutions has created strong partnerships and initiated strategic projects with a network of people who share our interests to develop new printed electronics technologies and new business opportunities."*

- Sylvie Lafreniere, Technology Ambassador of **GGI Solutions**, a large Canadian exporter

- Encourage participation with our annual CPES conference for international visibility
- Promote innovation through our CPES Innovation, Commercialization and Startup of the Year awards
- Organize Canadian delegations for international industry shows
- Expose members to over 10,000 industry professionals through our website, newsletter, video library, use cases and LinkedIn networks
- Provide opportunities to join end user Leadership Councils to create globally competitive products
- Deliver discounts, speaking opportunities at international conferences, partner events and market research



HR



89 bpm

NIPB



108/68 mmHg

SpO2



99 %

RR



16 rpm

BT



36.8 °C



## We help members develop their people and build winning teams

- Find new hires with over 20 intelliFLEX Member universities and colleges
- Post jobs, opportunities to OPE-Careers.com for experienced and new professionals
- Attend introductory courses for flexible and hybrid electronics, smart packing, smart textile and other subjects
- Attend 3-Day Hands on Technical Training at discounted rates
- Serve on vertical-specific end user Leadership Councils to develop expertise and executive leadership skills
- Network at our regional meetings and events

*"As an established packaging company that has seen the value of entering the smart packaging supply chain, our participation with intelliPACK has opened our eyes to differing challenges from our suppliers, customers and users of our products and services. The fact that we have been able to make these connections has also resulted in partnerships that have allowed us to work collaboratively, and increase our service offering."*

- James Lee, Director of Technology and Innovation for **Jones Packaging**, and Co-Chair, **intelliPACK Leadership Council**



intelli**PACK**

intelli**BUILD**

intelli**WEAR**

intelli**PART**

intelli**JOBS**

**CPES**   
Canadian Printable  
Electronics Symposium



## Learn more and join intelliFLEX

Does your organization face these challenges? Could your team benefit from getting plugged into a network that spans the entire ecosystem for FHE in multiple verticals?

intelliFLEX is a non-profit, member-driven organization. Independent consultants helped us develop a fee structure that is competitive and comparable with technology alliances in other sectors to ensure great value for the services that you receive.

Join intelliFLEX today @ [intelliFLEX.org](http://intelliFLEX.org)

**intelliFLEX**

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