

# intelliFLEX Innovation Alliance 2018 Annual Report

For the past 12 months



intelli**PACK**

intelli**BUILD**

intelli**WEAR**

intelli**PART**

intelli**JOBS**

**CPES** Canadian Printable  
Electronics Symposium

By the intelliFLEX Innovation Alliance  
Contact: Peter Kallai, President and CEO  
Date: October 15, 2018

A not-for-profit industry alliance founded in Canada, intelliFLEX a vital partner for accelerating the growth of the flexible and hybrid electronics sector across North America and abroad to enable the Internet of Everything.

# intelli**FLEX**

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Ottawa, Canada

## Letter from the CEO

Dear intelliFLEX members,

The following pages feature intelliFLEX's Annual Report for the past 12 months. We've put this together to show you the progress we've made on each of intelliFLEX's five main objectives, as previously developed by our members at our Sector Leadership Council meetings, and approved by our members at our Annual General meeting:

1. Product development advantage
2. Scale-up manufacturing advantage
3. International market access and development advantage
4. Financing advantage
5. Developing people/teams advantage

intelliFLEX has made excellent progress in each of these areas over the past 12 months, much of which is detailed in the following pages. We've shown excellent leverage for each membership dollar you pay us as we are developing a vibrant and growing industry ecosystem for flexible and hybrid electronics.

Please share this document with your senior management team, so they are aware of our activities and programs and they can take full advantage. If you have any questions or concerns, please contact me.

Sincerely,

Peter Kallai



## Summary of Activities

- In just four short years intelliFLEX has grown into a 125-member organization that's recognized both in Canada and internationally for developing the FHE supply chain and ecosystem in Canada. Every year, including this last 12 months, we have made significant progress.
- intelliFLEX has moved well beyond its original mandate of coordinating CPES, the annual conference and networking event. It has become a vehicle for supply chain development, thought leadership, industry training, startup support, fundraising for the FHE sector in Canada, and developing R&D projects, all while being a stepping stone to international markets. All of this was achieved on a shoestring budget.
- 26 new members were added over the last 12 months. For every membership dollar, we raised an additional \$2.50 from other sources in actual cash. We raised another \$2.00 in in-kind contributions such as editorial coverage, partner promotions, course development and now, for the first time, R&D development. In turn, for every dollar raised, we returned about \$5.50 in industrial benefits to members and industry.
- intelliFLEX produced a cornerstone analysis of the Canadian electronics industry, with the following results: It has ~2,000 firms and \$25 billion in annual output. ~50 per cent is in Ontario and ~25 per cent in Quebec, with the remaining ~25 per cent split between Alberta and British Columbia. Our Canadian membership numbers reflect a similar geographic distribution. This report helped provide guidance on the electronics and semiconductor industries to intelliFLEX members, and showed how FHE fits in to the electronics industry.
- intelliFLEX developed a Supercluster submission and is now waiting for the Advanced Manufacturing Supercluster to announce funding programs and Request for Detailed Proposals. The intelliFLEX-Myant Advanced Manufacturing for Smart Textile and Wearables project was shortlisted.
- The NSERC GreEN R&D Network, dedicated to sustainable green electronics, was funded by NSERC to the tune of ~\$6 million over five years. IntelliFLEX has been a major supporter of this network, with 22 industrial members participating.
- C2MI landed ~\$6 million in Quebec provincial government financing to develop a new facility dedicated to FHE manufacturing in Quebec. The facility will bring even closer ties with the semiconductor industry, which has been a main focus for C2MI. intelliFLEX delivered a foundational training event at C2MI, with over 50 participants, to bring stakeholders up to speed on FHE.
- intelliFLEX developed three one-day training courses over the last 18 months in (1)

smart packing, (2) smart textiles, and (3) FHE, delivering these courses in conjunction with PAC, the Apparel Federation, and other stakeholders. We hope to hold these courses at various trade shows and conferences across Canada and with individual companies.

- CPES has grown into a globally recognized event, and in 2018 had more than 175 participants with 22 industrial exhibits and training workshops. It has garnered international recognition – so much so that an IEEE international conference was recently held in Canada as a result. We received several international delegations and saw a surge in workshops organized by our members in Canada. We also organized the first Women in STEM breakfast and award in 2018.
- People are interested in CPES: Web traffic to our main and CPES sites strengthened in 2018 versus 2017. Total page views and users amounted to an average of 4,708 and 1,126 per month, respectively, in 2018, compared with an average of 3,774 and 523, respectively, in 2017.
- We have started R&D project development activities. The Tribo Electric Power R&D Project has \$700,000 in funding and in-kind contributions approved by NRC, NRC IRAP, and five industry participants. The \$1.6 million Smart Integrated Sensor R&D Project was submitted to NSERC for potential funding, led by ETS, with seven academic and industrial partners from Quebec.
- We received international delegations and representatives from Sweden, Taiwan, Greece, the U.S. and France. This enabled our members to create international linkages and explore partnerships for R&D and manufacturing. We also signed a MOU with the Taiwanese Smart Textile Industry Association, and will lead the Canadian delegation to the IDTechEx PE Show in Santa Clara, California.
- We submitted a proposal to Global Affairs Canada for ~\$40,000 in financial support for taking a delegation to LOPEC in early 2019 as part our effort to diversify our members' export markets beyond the U.S.
- We continued the development of intelliPACK and intelliWEAR. intelliPACK is a maturing committee with stable membership and participation from industrial members, with Leadership Council meetings held every six weeks from September to June. This year, intelliPACK added sub-committees active in (1) understanding consumers, (2) environmental issues, (3) live demonstrations for smart packaging, and (4) outreach. It also grew into an industry thought leader. The intelliWEAR committee is still in an emerging state after a successful first year that set direction, developed a training program, and identified the key industry development hurdles. We expect this council to mature over the next couple of years, similar to intelliPACK. Interested members are invited to join.
- In 2018 we also raised member awareness of existing and evolving industry standards. A new mirror committee was started by CSA Group (Canada) to enable

our members to contribute to the development of FHE standards. We have supported IPC (U.S.) initiating standards development for e-textiles. We also delivered a workshop to our members at CPES 2018 that provided an overview of various existing standards and new standards in development for our industry.

- People are interested in what's going on in our community: The average number of recipients per issue of our newsletter jumped by 70 per cent since December 2017. Our 2018 newsletters have averaged 1,359 recipients per issue, with an average open rate of 18.1 per cent. The number of recipients continued to grow into Q4 2018, with 1,476 by mid-October. Compare this to 2016, when we averaged only 514 recipients per issue.
- There was a consolidation and slight decrease in training and networking days in 2018 through intelliFLEX events, webinars and partner events at which intelliFLEX delivered or co-delivered workshops and networked on behalf of its members. Training days in 2018 averaged slightly less than one per month, while networking days in 2018 averaged 1.9 per month. Total training and total networking days in 2018 reached 1.6 and 1.8 events per month, respectively.
- In 2018 we strengthened the board of directors, governance, and member representation. New board members include senior executives from OM Signal, MW Canada, and Varitron, to give Ontario and Quebec an equal number of board seats. The board has been more active in 2018 in corporate decisions and is very dedicated to the future success of intelliFLEX.
- We continue to have financial and resource issues, as every possible dollar goes toward high-quality programs that maximize value for members. Many of our members didn't believe that our organization runs on a ~\$250,000 annual budget and only three part-time contractors, assuming that we run on \$1 million or more like similar associations. Our cashflows are often strained due to the original ~\$90K in losses from the startup years, and substantial investments in new programming. Our operating costs have also increased. The Board, along with intelliFLEX's CEO, will continue to look for government funding programs to help finance the organization's efforts, and put in place more people resources.

**New members added over the last 12 months include:**

- 1) Ynvisible Interactive
- 2) Jannatec
- 3) Nanogrande
- 4) Pliant Power Devices
- 5) Sheridan College
- 6) Varitron Technologies
- 7) KnowCharge
- 8) Sunray Scientific
- 9) University of Sherbrooke

- 10) Norbert Schlafli, (nsm)
- 11) Vista Medical
- 12) 3electromode
- 13) Biointeractive Technologies Inc.
- 14) C2MI - MiQro Innovation Collaborative Centre
- 15) CTT Group
- 16) Dryworld
- 17) Fit Assist Medical Inc
- 18) LifeBooster
- 19) Marie O'Mahony
- 20) Menrva Research Group
- 21) Movit Technologies
- 22) PUSH
- 23) Salu/Health Gauge
- 24) TELUS Health
- 25) VestechPro
- 26) XCo Tech Inc.

## **2018 THIRD QUARTER UPDATE**

This summer (between June 1 and August 31) we only operated with 25% of our usual resource levels, to conserve cash flow. The following activities were undertaken:

### **CPES 2018**

- Processed all video content for conference: videos were branded and uploaded to intelliFLEX's YouTube channel. In total, five in-depth videos were developed, and another 4-5 testimonial videos were also captured and processed after the event. Members will be provided these videos in September.
- Financial analysis and final invoice payments.
- Other project close-out activities were completed.

### **External & International Relations**

- Peter Kallai was invited to deliver keynote at TIFE2018 – Taiwan's Textile International Forum and Exhibition – after Taiwanese delegation hosted at CPES2018. We worked with the organizers to arrange travel and submitted a presentation.
- Continued social media growth on Twitter and with LinkedIn groups including the Printed Electronics Network (3,000-plus global members), intelliPACK, and intelliWEAR. Mailing list continues to grow, with 2,112 contacts across the industry.

### **Advanced FHE Manufacturing & Product Development Program**

- Assessed a potential for an MOU with Taiwanese Smart Textile Association as a pathway to qualified manufacturing partners, in case our members don't find manufacturing partners in Canada.
- NSERC: Green Electronics Network received \$6 million in funding. IntelliFLEX was a key supporter of the network and helped identify the need for sustainable electronics for smart packaging through its intelliPACK Leadership Council.
- Commenced the Tribo Electric Power R&D Project: \$700,000 approved in Q2 by NRC and NRC IRAP with five industry participants. Executed key agreements and documents required for funding and project start.

### **Industry Training**

- Planned Fall delivery of the FHE course, the intelliPACK Smart Packaging for Managers course, and 3-Day Skills-Based FHE Printing Course with ICI and NRC.
- Completed development and successful testing of the intelliWEAR Smart Textile Course with the CTT Group and NEXTEX. Testing took place at CTT in late August, with eight participants. Planned for commercial delivery in Fall 2018.

### **intelliWEAR**

- No meetings were held during the summer.
- Fall meeting was resumed on Sept 25, 2018.
- See activities re: course development and the Taiwan trip above, which both aimed at executing on action items from the Leadership Council.
- Completed revisions of the one-day course based on participant feedback.

### **intelliPACK**

- We had one conference call in the summer. Key discussions focused on who would lead the environmental sub-committee, PAC Back to the Future interactive packaging demonstration projects, and the interactive pass developed for the event.
- ICI was successfully appointed as the North American representative of AdPack Network, the EU smart packaging cluster. This originated from intelliPACK.
- Fall meeting scheduled September 2018.

### **Membership**



- We continued discussions with Fortune 500 companies such as Estee Lauder, GSK and Maple Leaf Foods as part of developing our intelliPACK LC and membership.
- The following members were secured in Q3:
  - Vista Medical
  - Norbert Schlafli, (nsm)
  - Knowcharge
  - University of Sherbrooke
  - SunRay Scientific
  - Sheridan College

### **Finance and Administration**

- We hired Jim Donnelly as our new director of programs, replacing Leo Valiquette. Since we were unable to find lower cost resources for the website and electronic mailing work, we continued to work with Sandra Bornn at a higher rate and reduced hours, as her rates increased for the first time in four years.

### **Board of Directors**

- We commenced monthly board meetings to address the issue/opportunity to move the association closer to its industrial membership base and regional funding organizations. Mississauga or Montreal appear to be good options.
  - We invited Varitron to the board of directors to strengthen Quebec's representation on our board.

## **2018 SECOND QUARTER UPDATE**

### **Successful CPES2018**

- Record number of attendees (175, a 15 per cent increase from 2017) including delegations from Greece, Sweden, the U.S. and Taiwan
- Expanded program scope well received with three Master Classes on Day Zero, along with the Women in STEM Award and Networking Breakfast
- Trade show featured 22 exhibits, including a tech demo
- Domestic technology companies were showcased via the CPES Innovation Awards, including:
  - Jones Packaging (London, Ont.) won the Commercialization Award



- TUKU (London, Ont.) in partnership with Array Marketing (Toronto) won the New Product Innovation Award
  - XCo Tech (Penticton, B.C.) won the Startup of the Year Award
  - Additionally, Dr. Michelle Chretien won the first Women in STEM Award
- Four startups were mentored for more than two months, for pitch sessions at the event in front of BDC, OCE, MARS, and Innovation Accelerator Fund investors. Seven startups presented:
  - Acquire Industries (Toronto, mentored 2017)
  - Brilliant Matters Organic Electronics (Quebec City, mentored 2018)
  - Kinesix Sports (Montreal)
  - Nanogrande (Montreal, mentored 2018)
  - Pliant Power Devices (Toronto, mentored 2018)
  - XCo Tech (Penticton, B.C.)
  - Ynvisible (Vancouver)
  - 3D Circuits (did not present, mentored 2018)
- Varitron Technologies announced as first of the top five Canadian electronics manufacturers to join intelliFLEX
- New and returning sponsors include Novacentrix, XRCC, Tech-Access Canada, Keystep Growth & Finance, Centennial College, EP&T Magazine, IT World Canada, IDTechEx, Printed Electronics Now, Printed Electronics World, and Health Tech Insider
- Regional and association partners include Alberta Council of Technologies, AFELIM, CABA, CME, IEEE Canada, IDTechEx, Invest Ottawa, IPC, NRC, PAC, SEMI | Flextech, and Prima Quebec
- Secured ~15 pieces of editorial coverage related to CPES2018 from Canadian Packaging, EP&T, Graphic Arts Magazine, Health Tech Insider, IT World Canada, Ink World Magazine, Manufacturing Automation, PrintAction, and Printed Electronics Now
- On the downside, CPES2018 revenue suffered from lower-than-usual sponsorship dollars and higher-than-expected expenses due to staff hours, along with A/V service issues at the host venue, Centennial College

### **External & International Relations**

- Continued discussions and relationship building related to positioning intelliFLEX with Canada's Advanced Manufacturing Supercluster – Jayson Myers, CEO Next Generation Manufacturing Canada, featured as a keynote at CPES2018
- Peter Kallai was invited to deliver keynote at TIFE2018 – Taiwan's Textile International Forum and Exhibition – after Taiwanese delegation hosted at

### **Advanced FHE Manufacturing & Product Development Program**

- Continued development of intelliFLEX's proposed Flexible & Hybrid Electronics (FHE) Advanced Manufacturing Institute and Smart Textile and Wearables Manufacturing Institute
- PE Pilot Scale Manufacturing Facility at C2MI: ~\$6.5M in Quebec government funding confirmed, with Varitron a major corporate sponsor
- Tribo Electric Power R&D Project: \$700,000 approved by NRC, NRC IRAP with five industry participants
- Smart Integrated Sensor R&D Project: \$1.6M submitted to NSERC funding, led by ETS, six to seven academic and industrial partners from Quebec
- Green Electronics Network proposal to NSERC: In progress by Mario Leclerc at Laval. NSERC due diligence meeting took place on April 19 in Montreal, with more than 25 companies in attendance

### **Industry Training**

- Partnership with EP&T's EPTECH electronics shows to co-locate our new, one-day FHE course at EPTECH shows across Canada through 2018 off to a slow start. First delivery in April cancelled due to low enrollment
- Commencement of on-demand delivery of FHE course with regional partners fared better:
  - Kitchener-Waterloo with Mitchell Plastics completed in April with high satisfaction
  - Bromont, QC at C2MI Technical Conference completed in April with 50-plus participants
- 3-Day Hands-On Printing Electronics Training Course with ICI and NRC scheduled for Fall 2018

### **intelliWEAR**

- Started regular meetings, identified sector strengths and issues, and now working on describing R&D centres
- Session at CPES2018

- Outreach at Ottawa IoT613 event through keynote (150 attendees)
- Supporting partner for Vestechpro's wearables event in Montreal (150 attendees)
- Completed development of one-day Smart Textile Course with CTT Group – regular deliver scheduled for October 2018 in Toronto
- R&D project to add smart, integrated sensors to wearables in planning stages

### **intelliPACK**

- Subcommittees established for Consumer, Environment, Outreach and Tech Demonstration with detailed mandates
- Session at CPES2018
- Speaking engagements and article in Graphic Arts Magazine
- First delivery of Smart Packaging for Managers Course booked in Toronto for October, promotions started with PAC

### **intelliPART**

- Building relationship with Automotive Parts Manufacturers' Association (APMA). Several members presented at CPES2018, including VP of APMA Emerging Tech, VP and GM-level presenters from TE Connectivity and Martinrea, and University of Sherbrooke
- Regarding aerospace, building a relationship with CARIC, the national R&D network for that industry. CPES2018 included presentations from CARIC's CEO as well as Bombardier and CMC Esterline

### **Membership**

- Continued to build contract manufacturing and integration capabilities among the membership, with Varitron Technologies joining in May (announced at CPES2018).
- Second Strategic Meeting of Quebec Stakeholders held at ICI in Montreal, June 14, with a Quebec Regional Chapter under development
- Ontario Regional Event with XRCC, the Chemical Institute of Canada and IEEE Toronto took place April 4

- Four new members secured in Q2

### **Finance and Administration**

- New and more ambitious events schedule for 2018 commenced in Q1 put additional strain on the association's resources, as we continue to work toward a sustainable model that will generate positive revenue
- Due to lack of financial progress in generating training and sponsorship revenues, we let go of our part-time events manager in April. This put strain on existing resources to pick up the slack and adequately prepare for CPES2018
- Continued effort to hire a combined executive assistant/membership coordinator but so far without success
- Core team is moving on to new opportunities after four years providing their services to the association at a substantial discount from their going market rates – Board of Directors must rebuild and hire new people over the summer to run the association
- This provides the Board with the opportunity to move the association closer to its industrial membership base and regional funding organizations – Mississauga or Montreal appear to be good options

### **2018 Annual General Meeting**

- Held at Centennial College in May 2018 with 24 Full Members present in person or by proxy, and 12 Associate Members present in person
- Presented the 2017 report and financial statements which were approved
- Presented the 2018 operating plan and budget, which were approved
- Motions carried to re-elect board members Paul Smith (VP, Xerox Research Centre of Canada), Peter Kallai (President and CEO, intelliFLEX), and Howard Campbell (Business Development, Memtronik Innovations)
- Board expanded to six seats with motions carried to elect Aldjia Begriche (VP Smart Textiles, OM Signal) and Bob Berger (CEO, MW Canada)
- Motion carried to re-confirm the accounting firm Parker Prins Lebano

## **Quarterly Board of Directors Meeting**

- Q2 meeting held July 6, 2018

## **2018 FIRST QUARTER UPDATE**

### **Drive to CPES2018**

- Secured keynotes, speakers, exhibitors, academic posters, startup mentoring and Launchpad participants, and finalizing the agenda in collaboration with partner organizations
- Expanded scope confirmed with Master Class program, addition of Women in STEM award to Innovation Awards, and Women in STEM Networking Breakfast
- Completed event website, with tighter integration with intelliFLEX website to promote the association alongside conference
- Secured ~10 pieces of editorial coverage from CABA Newsbrief, Canada Makes, EP&T, Graphic Arts Magazine, Health Tech Insider, IT World Canada, and Printed Electronics Now
- An application for event financial support was submitted to NSERC

### **External & International relations**

- Continued effort through direct solicitation and intelliWEAR Leadership Council events to encourage members of the Smart Textile and Wearables Innovation Alliance (STWIA) to take formal membership with intelliFLEX. To date, ~17 have done so.
- Discount rates obtained for intelliFLEX members with various industry events and conferences, including AFELIM (March 28), Sensors Expo and Conference (June 26-28), IDTechEx PE USA (Nov. 14-15).
- Continued social media growth on Twitter and with LinkedIn groups including the Printed Electronics Network (3,000-plus global members), intelliPACK, and intelliWEAR. Mailing list continues to grow, with 1,946 contacts across the industry.

### **Advanced FHE Manufacturing & Product Development Program**

- Continued development of intelliFLEX's proposed Flexible & Hybrid Electronics (FHE) Advanced Manufacturing Institute and Smart Textile and Wearables Manufacturing Institute, following the Sector Development Leadership Council in October 2017.
- Published an Electronics Industry Profile: Extensive research of available data from Statistics Canada and other sources, to create a first-of-its-kind infographic to visualize the scale of Canada's electronics design and manufacturing sector.
- New application notes and use cases developed with Voltera, Awake Labs, Tangio, Myant, PUSH and CTT Group.
- Submitted funding application to NRC-IRAP CTO Program for up to \$250k for a research project supported by five member companies valued at more than \$700k.

### **Industry Training & Mentoring**

- Partnership with EP&T's EPTECH electronics shows to co-locate our new, one-day FHE course at EPTECH shows across Canada through 2018.
- On-demand delivery commenced of one-day FHE course with regional partners: Toronto with XRCC (March), Kitchener-Waterloo with Mitchell Plastics (April), Bromont QC at C2MI Technical Conference (April).
- Mentoring three startup companies with MARS and BDC over a 10-week period prior to CPES 2018.

### **intelliWEAR**

- Continued development of new vertical business network and leadership council focused on smart textiles and wearables, following takeover of STWIA from NRC in Q3 2017.
- intelliWEAR Leadership Council meetings held January/February to set strategic direction and chart next steps, vis-a-vis the Advanced Manufacturing Supercluster and proposed STW Manufacturing Institute.
- New one-day course in smart textiles and wearables in development for test delivery to start in Q2

## **intelliPACK**

- Following the Get Smart Summit in Q4 2017, co-published with PAC the digital transformation white paper “Why reaching consumers through intelligent packaging is crucial to your business.”
- intelliPACK Leadership Council meetings held January/February, with new subcommittees established in four areas: Consumer, Environment, Demo Development, and Outreach.
- The one-day intelliPACK course was scheduled for Oct. 11, 2018 with PAC, along with other activities such as speaking at AIPIA New Jersey and the PAC conferences in fall 2018.

## **intelliPART**

- Started preparations with the aerospace and automotive sectors for this Leadership Council, after visiting with CARIC, Bombardier, and CMC Electronics.

## **Membership**

- Continued effort to build contract manufacturing and integration capabilities into the membership, with discussions underway with organizations such as Lululemon, L’Oreal, Bombardier and Bell Helicopter.
- First Strategic Meeting of Quebec Stakeholders held at ICI in Montreal on March 19 (Quebec intelliFLEX members are discussing the creation of a provincial chapter to facilitate their ability to lever support from the Quebec government).
- Secured five new members in Q1 2018.

## **Quarterly Board of Directors Meeting**

- Meeting held via teleconference April 16.

# **2017 FOURTH QUARTER UPDATE**

## **Ramp up for CPES2018**



- Event confirmed for May 23-24, 2018 at Centennial College in Toronto
- Development and launch of event website with call for speakers, academic poster and tabletop exhibitors, award submissions, sponsors, and a new two-tier early bird promotion
- Expanded the scope of CPES, with new Startup Launchpad, and a Women in STEM program and award to support greater diversity across the eco-system
- Massive effort spooling up for Q1 2018 through direct solicitation, email campaigns, social media, promotion through strategic partners with member discounts, and advance coverage by media sponsors to drive registrations and grow the event
- Corporate sponsors secured/re-signed to date NovaCentrix, XRCC, Keystep Growth & Finance. Media sponsors include EP&T Magazine, IT World Canada and Printed Electronics Now, with Health Tech Insider and IDTechEx/Printed Electronics World in discussion.

### External & International relations

- intelliFLEX continued to engage at a strategic level with the proponents of two of the remaining supercluster proposals, with additional consultation and submission documentation to ensure intelliFLEX has a place at the table should either or both proposals be chosen by the Government of Canada in the spring of 2018:
  - The advanced manufacturing supercluster, led by Communtech, MaRS and the Government of Ontario
  - MOST 21 proposal, led by the Consortium for Aerospace Research and Innovation in Canada (CARIC) and the Green Aviation Research and Development Network (GARDN)
- intelliFLEX co-led the Canadian delegation to IDTechEx Show/Printed Electronics USA in Santa Clara CA in November, where three Canadian Member companies claimed half of the awards up for grabs. intelliFLEX exhibited in the Canadian Quarter. 16 intelliFLEX Members exhibited in all and over 40 Canadian companies were present with some 80 people at the show
- Continued effort through direct solicitation and intelliWEAR Leadership Council events to encourage members of the Smart Textile and Wearables Innovation Alliance (STWIA) to take formal membership with intelliFLEX. To date, 16 have done so
- Discount rates obtained for intelliFLEX Members with various industry events and conferences, including IDTechEx Show/Printed Electronics USA, Smart Haptics 2017, IQPC's Pharmaceutical Packaging & Labeling Conference
- Secured ~10 pieces of editorial coverage related to new member announcements,

CPES2018 launch, industry event attendance, from EP&T, Electronics Media FlexoGlobal, Printed Electronics Now, Graphic Arts Magazine

- Continued social media growth on Twitter and with LinkedIn groups that include Printed Electronics Network (3,000+ members globally), intelliPACK, intelliWEAR. Mailing list continues to grow, with 1,600 contacts across the industry

### **Advanced FHE Manufacturing & Product Development Program**

- Successful Sector Development Leadership Council on Oct. 24, which focused on intelliFLEX's proposed Flexible & Hybrid Electronics (FHE) Advanced Manufacturing Institute and Smart Textile and Wearables Manufacturing Institute:
  - High-level group discussed how these institutes should operate and be governed, how they should be funded, what manufacturing and commercialization challenges they should focus on, how they align with the Government of Canada's Superclusters Initiative, and whether the same needs can, and should, be met for the broader FHE industry with a single institute rather than two
  - Results of this meeting and updated project proposals submitted to our supercluster partners
  - More detailed plan for each institute forthcoming in Q1 2018
- Final development of new 1-day course in printable, flexible, hybrid electronics following test delivery in September. Discussions underway to market through regional partners and agreement pending with EP&T to deliver courses as part of EP&T's EPTECH electronics shows through 2018. Our Alberta partner ABCTech will help us deliver locally in Alberta in February
- Successful webinar for NRC's IRAP Industry Technology Advisors to help intelliFLEX members secure IRAP support
- New application notes and use cases in development for Q4 publication with Kinesix Sports, CRC, Laipac Technologies

### **intelliWEAR**

- Launch of new vertical business network and leadership council focused on smart textiles and wearables, following takeover of STWIA from NRC in Q3
- Continued effort to bring STWIA members into the intelliFLEX fold, as referenced above
- 2nd intelliWEAR Leadership Council meeting held at Myant on Nov. 21, to set the strategic direction for the LC, finalize its mission and mandate
- intelliFLEX participated in Startup Fashion Week, Oct. 17, Toronto

## **intelliPACK**

- First-of-its-kind Get Smart Summit on Oct, 17. This one-day event gathered decision-makers from across the supply chains for packaging and retail, as well as for the printable and flexible electronics (FHE) required to add intelligence to packaging, to explore the digital transformation challenge and opportunity facing them today
- White paper on the role of intelligent packaging in digital transformation for the retail supply chain developed from Get Smart Summit proceedings, pending formal release in Q1 2018
- intelliPACK Leadership Council Meeting with facilities tour took place Nov. 30 in Ottawa at the NRC that included a facility tour and special presentations by the NRC on its intelligent packaging R&D.
- intelliFLEX and Jones Packaging attended the IQPC's Pharmaceutical Packaging & Labeling Conference in Philadelphia in early December and delivered a two-hour presentation on smart packaging
  - Draft version of Get Smart Summit digital transformation white paper referenced above was introduced to attendees of this conference

## **intelliBUILD**

- No activities were planned for this quarter

## **Membership**

- Continued to build our membership base, driven by integration of STWIA membership. Through the first nine months of 2017, we added 25 new members. In the fourth quarter, we added 15 more:
  - 3electromode
  - Biointeractive Technologies Inc.
  - C2MI - MiQro Innovation Collaborative Centre
  - CTT Group
  - Dryworld
  - Fit Assist Medical Inc
  - LifeBooster
  - Marie O'Mahony (OCAD)
  - Menrva Research Group
  - Movit Technologies
  - PUSH
  - Salu/Health Gauge
  - TELUS Health
  - VestechPro
  - XCo Tech Inc.

## Finance and Administration

- Ramped up a more ambitious events schedule through remainder of 2017 and for 2018 with addition of new part-time events manager, Marie Bilodeau, in Q3
- Continued effort to hire a combined executive assistant/membership coordinator but so far without success
- Implementation of new membership management database with website relaunch and rebranding
- 2018 membership invoice renewals issued in October, collection remains a tedious and time-consuming task
- Continued to carefully manage cash flow as Members are slow to pay 2018 renewals. CPES2018 sponsorship renewals have also gotten off to a slower start versus previous years, putting further strain on cash flow
- intelliFLEX also continues to be short cash flow for proper operation due to past losses despite positive income and manageable expenses for the first nine months of the year. The association continues to be in arrears for Q4 expenses
- Cash flow will improve as we increase membership if we can contain our costs and maintain or increase event and training revenues through CPES2018, the one-day FHE Training Course and the intelliPACK One Day Course

## Quarterly Board of Directors Meeting

- Fourth quarter/year end meeting will be held in Dec. 19 at XRCC after Board decided at the June 2017 meeting to forego a third quarter meeting and convene again after the Oct. 24 Sector Development Leadership Council consultations.

## 2017 THIRD QUARTER UPDATE

### Successful rebranding, relaunch as intelliFLEX Innovation Alliance

- Developed and launched new website: [www.intelliflex.org](http://www.intelliflex.org)
- Redesigned program offering to focus on key priority areas identified by industrial members: New product development, scale up for manufacturing, accessing global markets, securing growth capital, finding top talent
- Well-attended free webinar in September to discuss changes, recorded for anytime

access

## External & International relations

- Federal government's Superclusters Initiative:
  - intelliFLEX executive secured 10-plus high-level meetings with potential partners related to third-party supercluster proposals. Decision made at board level to align intelliFLEX with four supercluster proposals:
    - The advanced manufacturing supercluster, led by Communtech, MaRS and the Government of Ontario
    - The photonics and microelectronics supercluster, led by the National Optics Institute (INO) and the MiQro Innovation Collaborative Centre (C2MI)
    - The MOST 21 proposal, led by the Consortium for Aerospace Research and Innovation in Canada (CARIC) and the Green Aviation Research and Development Network (GARDN)
    - The Automotive proposal, led by the Automotive Parts Manufacturers Association (APMA)
- Agreement reached with the National Research Council of Canada to assume control of its Smart Textile and Wearables Innovation Alliance (STWIA), as a foundational step to create the intelliWEAR vertical business network and Leadership Council
- Secured ~10 pieces of editorial coverage related to brand relaunch and new member announcements, including OPE Journal, Printed Electronics Now, PrintAction, Graphic Arts Magazine, ITBusiness.ca
- Our Printed Electronics Network LinkedIn group surpassed 3,000 members globally. Our mailing list has grown significantly – now up to ~1,600 contacts across Canada

## Advanced FHP-E Manufacturing & Product Development Program

- For October Sector Development Leadership Council, agenda to focus on further developing two institutes intended to bridge the commercialization and scale-up gap for Canadian SMEs (following mandate granted by members at 2016 AGM in May):
  - Flexible & Hybrid Electronics (FHE) Advanced Manufacturing Institute
  - Smart Textile and Wearables Advanced Manufacturing Institute (tied to intelliWEAR below)
- 1-day course in printable, flexible, hybrid electronics: Development and test delivery

in September of new one-day course intended to educate the marketplace, serve as a member development tool. Final development and marketing through regional partners planned for Q4

- Webinar for NRC's IRAP Industry Technology Advisors in development for October to help intelliFLEX members secure IRAP support
- New application notes and use cases in development for Q4 publication with TUKU, CRC, Laipac Technologies

## **intelliWEAR**

- Launch of new vertical business network and leadership council focused on smart textiles and wearables, following takeover of STWIA from NRC:
  - STWIA members encouraged to join intelliFLEX with fee incentives
  - Development of 10-month communications/integration plan for STWIA Members
  - September Leadership Council launch events in Toronto and Vancouver in partnership with NRC to discuss common challenges, define strategic priorities, develop mandate and program objectives for intelliWEAR:
    - Toronto event attendees included Awake Labs, Be Wear Wearable Technology, Centennial College, CTT Group, Jannatec Technologies, GO 2 SCOUT 4 R&T, intelliFLEX, Myant, NRC, O'Mahony Consultancy, Push, RFID Canada, TELUS Health. Xerox Research Centre of Canada
    - Vancouver event attendees included EPIC Semiconductors, intelliFLEX, lululemon athletica, Mio Global, NRC, Plantiga, Simon Fraser University, WearCare, WOKE, XCo Tech (attendance lower than expected due to venue location)
    - Participation planned for Startup Fashion Week, Oct. 16-20, Toronto

## **intelliPACK**

- One-day course, Smart Packaging for Managers, was completed following the June 7, 2017 test delivery of the course. The most significant update was the addition of a Big Data and Data Analytics Module based on inputs received from key participants
- Continued development of programs for Get Smart Summit for Oct. 17 in Mississauga. We held several meetings related this event. Secured four tabletop exhibitors and expect 75-80 participants

- Continued to make arrangements for subsequent events. Continued to grow the membership with new Members such as Memtronik Innovations and RFID Canada

### **intelliBUILD**

- No activities were planned for this quarter

### **Membership**

- Continued to build on our stable base of 95 Members, driven by integration of STWIA membership. After a first half of 2017 that saw intelliFLEX add 16 new Members, in Q3 added nine more

### **Finance and Administration**

- Hired dedicated part-time events manager, Marie Bilodeau, to expand events schedule, reduce hourly labour costs, build redundancy into the team
- Continued effort to hire a combined executive assistant/membership coordinator
- Adoption of new membership management database with website relaunch and rebranding
- 2018 membership invoice renewals to be issued in October
- Continued to carefully manage cash flow by reducing operations through June, July and August. Association continues to be short cash flow for proper operation due to past losses despite positive income and manageable expenses for the year to date—we expect same for 2017 CY. As of the end of October, we will be in arrears for September and October expenses
- Cash flow will improve as we increase membership if we can contain our costs and maintain or increase event and training revenues through CPES2018, the one-day FHE Training Course and the intelliPACK One Day Course

### **Quarterly Board of Directors Meeting**

- The Board decided at the June 2017 meeting that the next meeting should be after the Sector Development Leadership Council consultations on Oct. 24.