A New Strategic Vision:

The Innisfil Public Library (IPL) released a new Strategic Plan in 2012 which sparked the transformation of its service delivery model. The Library Board and Staff investigated new approaches to service delivery which would activate a culture shift in Innisfil. IPL recognized the need for our library to evolve in order to remain relevant and continue to benefit the community – a challenge faced by all public libraries. One main priority addressed in the Strategic Plan is to **Cultivate a Hacker Ethic**. The ultimate goal is to enable all residents to become comfortable with the tools that allow them to create, collaborate, innovate and pursue their personal and professional objectives. Through creative hands-on experiences and learning, IPL’s new initiatives have instilled an element of wonder, encouraging the community to experiment, play, and discover.

Embracing a Hacker Ethic:

IPL's strategic focus on **Cultivating a Hacker Ethic** has many people within the Innisfil community, as well as the Library community asking about the term's definition and why IPL would adopt such a thing in a library setting. Libraries have traditionally been institutions of consumption, but must now evolve to become creation places where people gather, learn from each other and use new skills. IPL truly believes that public libraries are hubs for hands-on learning and can develop active hacker spaces where people can come together to be creators and makers. Providing flexible creation and learning spaces will enable a more creative community to thrive in a social, public commons.
Like hackers, the idea of a Hacker Ethic has been around for decades. The original culture and thinking around hacking has been linked to work done at the Massachusetts Institute of Technology during the 50s and 60s. In 1984, journalist Steven Levy authored a book entitled “Hackers: Heroes of the Computer Revolution”. While others came after him with varying definitions, his encompasses some of the key principles that triggered the direction we are taking:

**Sharing** – We want information to be free. Like we always have!

**Hands-On Imperative** – People should be encouraged to take things apart, discovering and developing ideas of their own.

**Community and Collaboration** – we want to connect people with like-minded interests or even complementary niche interests.

IPL's definition of a Hacker Ethic draws on these three elements of Levy's definition, but we are continually reassessing how to develop our focus based on the dynamics of our community. Ultimately, what we are supporting is genuine critical thinking - the move from blind consumption of ideas and things, to the active production and modification of ideas and things, done in the community.
Creating the Hacker Lab: Innisfil ideaLAB

With major renovations under way at IPL’s largest branch, a temporary home was found two blocks away in a vacant commercial space. This presented an opportunity for the library to showcase some of the creative tools and software that have developed out of recent strategic directions. Dubbed the ideaLAB, the new hacker lab is pushing the boundaries of library service to the next level.

Community members can design and create unique projects using the 3D printers, vinyl and laser cutters. They can play, record and edit music or videos in the digital media lab; use a green screen for special effects; build a robot; or solder simple electronics projects, sculptures, and jewellery.

Local entrepreneurs have access to the equipment to develop and create marketing packages, websites, vinyl signs, promotional videos, and business cards. Library staff provide the initial training, ongoing assistance and encouragement sparking all kinds of creativity in the community!

Integrating the branch collections and programs alongside these new creative initiatives provides an exciting opportunity for the community to realise that these elements can and should exist within the same space.

We run into hackers of all types in the ideaLAB on a daily basis: it may be a group of teenagers remixing their favourite song, a local musician soldering together the wiring of his home-made electric guitar, or a child 3-D printing her own unique creature creation. We believe that this creative production of ideas can and should be fostered in a public space where collaboration becomes second nature.

“Have you been to the Library recently? You should see it! They moved into an old Shoppers Drug Mart and you should see what they’ve done with the place! Just incredible! Amazing really! They’ve got laser cutters and 3D printers! And the staff is just so friendly!”
Impact of the Project:

Impact on Organizational Culture
• Staff positions have been modified and new positions developed that focus on maker culture, new technologies, and media skills. For example:
  o IPL has two Resident Tinkerers, who are responsible for coordinating and championing our hacker ethic within the ideaLAB;
  o IPL’s ‘Artist in Residence’ role evolved in 2012 to showcase artists with new media art and technology skills and projects;
  o IPL’s University Co-Op position was modified in 2013 to focus on Creative Digital Media skills.
• Employees at all levels have been empowered to take on new roles and responsibilities, learn new technologies, and revise the planning of current programs and events to include more of a hands-on/maker component.
• Board and staff meetings have been revamped to involve more hands-on training and education in a variety of areas, including electronics, new technologies, maker projects and other creative experiences.
• A Mentor Program has been developed which will encourage community members to share their skills and expertise with others at the library, in the form of workshops and live demonstrations.

IPL staff member Wendy learning to solder.
Impact on Library Programs

- After School programs have been altered to better engage residents with new technologies. Examples include 123D Creature, Mini Makers, Green Screen Halloween, LEGO Mindstorms, Makey Makey, Leap Motion, Hour of Code etc. Programs are revamped throughout the year, with special workshops developed during holidays, March Break and summer programming. The number of participants attending programs have been consistently higher than sessions prior to our change in direction, with waitlists for almost all programs.

  “I just think the ideaLAB is so amazing. My boys love going there and there is something for everyone. All of your machinery is incredible. You have equipment and you let the children touch and work with it. I think that’s pretty amazing. Especially for a town like Innisfil to have something like this…we’re really lucky.”

- IPL developed a Check Out a Skill program, which enables the public to book 1 hour personal sessions with Library staff in a variety of areas. Everything from learning Facebook, to how to work a GPS, to how to design using Sketch-Up CAD software are explored. Community members are matched with the staff member with the most expertise in the area, and are able to receive a personalized session, which often leads to self-directed learning, and using the Hacker Lab equipment and software without instruction. The drop-ins are a preferred route for people to learn about the technology. One-on-one learning is a natural fit for the Hacker Lab because of the amount of guidance that is needed and the specific nature of each person’s design ideas.

Multiple sessions follow a 3 step process:
  - Your first visit is often built around elements of wonder and amazement. You might 3D print something that has already been designed by someone else, or you might vinyl or laser cut something that is very simple and has an immediate take-away.
Your second visit will include a lot more encouragement by Staff for you to create your own thing. Maybe it’s still a simple 3D design, but it might actually require the use of more than one machine to make your idea come to life. Staff will also encourage you to do your own clicking and controlling of the equipment (with a lot of step-by-step guidance, as needed).

Your third and subsequent visits are when Staff will be expecting more from you. You will have their assistance to run the machines safely and efficiently, but you are now in the pilot’s seat! Bring those ideas to life!

“Nolan is a very bright and interested young lad who wanted to try making something on the vinyl cutter. We used Google’s image search, Inkscape and the Roland CutStudio software to create a custom decal. He was quickly made comfortable working with these programs with some one-on-one direction.”

Experimenting with 3D Scanning

- IPL developed a First Lego League Team in both 2013 and 2014. 10 youth, ages 10-14 have participated each year, and meet with their team at the Hacker Lab weekly for 3 months prior to the provincial challenge. This year the team was generously sponsored by the Royal Bank of Canada in Alcona, a wonderful and strategic community partner.

2013 First Lego League Team at the provincial competition.
“They have loved these programs and have learned fabulous skills and cool info - as a homeschooling mom, I so appreciate supplementing their education in this way. Also we have connected with fantastic moms and kids!”

- Workshops have been developed to introduce the public to the Hacker Lab. Introductory courses have been offered in 3D Design and Printing, Laser Cutting, Vinyl Cutting, Sound Recording, Electronics etc. as well, more in-depth courses such as Laser Cut Cards, Clocks and Coasters, Vinyl Print Your Business Signs, and recently a 5 Week Laser Craft course. One notable workshop was a multi-part program on building a cigar box guitar with a transducer soldered on so that it can be plugged into an amplifier. Ten workshop participants signed up, paying $25 each, which allowed them to take home their own customized cigar box electric guitar.

![Participants showing off their guitar creations.](image)

“Cathy, a middle-aged woman, has become an enthusiastic, repeat user of the makerspace. She is really coming up with lots of ideas for making things as gifts, and she is trying to become more independent in using the Inkscape software.”

- A monthly Maker Meet Up night was initiated in July 2014, which features a night of show and tell, inviting the public to demonstrate the interesting projects they are hacking away on, in an informal and friendly environment. The event focuses on sharing and exploring novel projects, beginning with a main presentation, followed by an informal show and tell, and light hack night.
2014 Monthly Maker Meet Up

- IPL has been approved for licensing with Make Magazine to hold a Mini Maker Faire in 2015, which demonstrates the change in types of programs and events traditionally held at the Library.

Impact of Outreach

IPL redesigned school outreach to offer a program during the 2013/14 school year titled: Library on the Loose: 3D Printing and Design Workshops in the Schools. This program provided an opportunity to increase the community’s awareness of IPL’s new focus on a Hacker Ethic while introducing elementary students to 3D printing and design. An in-depth analysis of the program showed the following impact:

- All eight Innisfil elementary schools participated in this outreach initiative from October 2013-April 2014. In total, 72 classes received the workshop, reaching 1916 students.

- 100% of our target audience participated. Grades 3-8 at every school were invited to attend and a few schools even requested their Grade 2’s be allowed to participate, which we accommodated.

- Ongoing opportunities for students to practice and further develop the skills learnt in the workshops were provided through in-house 3D printing workshops. Attendance has been extremely strong with waitlists and additional sessions being necessary.

- The outreach based approach of this initiative resulted in significantly higher participation than what could have been accommodated in-house. Making ourselves available in the schools allowed every school to participate (not just those located within walking distance of a branch) and allowed classes to rotate through back-to-back, increasing the number of classes and students that were able to participate on a given day.
• The program not only filled a niche for IPL by widely promoting the new focus, but also met a need for the schools by aligning with their STEM-based curriculum goals.

• Students and teachers showed great interest during the workshop and with the hands-on component. Small groups worked together to create their creatures, with some type of participation from every student in attendance.

• Following the workshop, the ideaLAB saw an increase in new families exploring the space having been told about IPL’s new initiatives by their children who had participated in the workshops.

• Most rewarding were the children who came into the lab to print models they had created at home, having downloaded the free 123D Creature App onto their personal devices. We saw other children arrive to further explore the App using library hardware.

• Interest for in-house 3D printing workshops also increased significantly following this initiative – the summer sessions offered at IPL filled immediately and had long wait lists.

• Teachers have requested more outreach opportunities for the upcoming school year which focus on maker projects. IPL is in the midst of redesigning the Library on the Loose program to offer more opportunities for learning, and incorporate other new technologies.

• In early fall 2014, the Simcoe County School Board provided each elementary school in the County with equipment and software for green screening photos and videos. IPL staff was invited to provide training for 39 teachers, teacher librarians and principals in October 2014. The school Board is eager to partner again for future professional development days.
Impact on Business Community

- Library staff have presented targeted outreach to the local Chambers and Business Associations. A networking event with the Innisfil Chamber of Commerce took place in 2013 at the Library, and the Alcona Business Association have relocated to the ideaLAB for their monthly meetings since summer 2014. Having a presence in the ideaLAB allows members to discover the equipment and tools and discuss how the hacker lab can provide opportunities to benefit their businesses.

- Library staff were invited to present information about the ideaLAB and Hacker Ethic at the 2012 and 2013 Small Business Week event at the Innisfil Town Hall.

- Business owners have created vinyl signs for menus, hours of operation, and window decals; laser cut signs, logos and promotional items; designed logos and business cards; recorded promotional videos; and generated sound clips for music lessons.

- Library Staff attended the South Simcoe Business Awards evening held at the Innisfil Town Hall in April 2014. The Library was asked to showcase the amazing technologies and tools we have been working with, and add a unique experience to the event. Staff demonstrated the 3D printer, vinyl cutter and green screen. Pictures of award winners and event attendees were taken on the green screen and superimposed over a flashy red carpet background.
The ideaLAB hosted a full day session for youth enrolled in the government of Ontario’s Summer Company program offered by Nottawasaga Futures. Local entrepreneurs were able to use the tools and equipment at the lab to create promotional items for their businesses.

Young entrepreneurs learn how to make promotional items for their business

Impact on the Library Community

- IPL has been invited to speak about our new direction with Hacker Ethic at various conferences, including but not limited to:
  - 2013 OLA Super Conference
  - Evergreen 2013 Conference
  - 2013 Library as Space Conference
  - Education Institute Webinar (Creative Digital Media)
  - Halinet Conference 2013 (Strategic Plan/Hacker Ethic)
  - Mississauga Staff Conference 2013 (Strategic Plan/Hacker Ethic)
  - Toronto Public Library Staff Conference 2013 (Strategic Plan/Hacker Ethic)
  - Ministry of Tourism, Culture and Sport Branch Day 2013 (Strategic Plan)
  - 2014 OLA Super Conference
  - 2014 Creative Making in Libraries & Museums Symposium

- IPL staff will be presenting 2 sessions at the 2015 OLA Superconference in relation to our new direction: **How to Make it: Differing Approaches to Makerspaces**, presented in conjunction with Toronto Public Library, and **Empowering Library Stakeholders to Adopt Maker Culture**.

- Many Libraries in the province have contacted IPL to discuss our direction with Hacker Ethic and to receive tours of the Hacker Lab. In 2013 IPL hosted an Open House, which was attended by 25 Library Professionals from Toronto, Hamilton, Brantford, Clarington, Blue Mountains, and Whitby. The visit began with a presentation on IPL’s vision and the broader sense that libraries need to start doing something spectacular for their
communities. Following the presentation, our guests were sent to stations where they had hands on opportunities to engage with 3D printing, the digital media lab, and some of our new maker projects for afterschool programs. Many other tours have been given to Library Professionals from Oakville, Waterloo, Aurora, Ryerson University, the University of Toronto, Richmond Hill, Vaughan, St Thomas, and more. IPL is happy to connect with others within the Library community to share our experiences, stories and best practices.

Visitors from other libraries experience the Digital Media Lab and experiment with the vinyl cutter.
Screenshots, Screencasts, or Documentation

Strategic Plan: http://www.innisfillibrary.ca/content/strategic-plan-0

Overview of Hacker Lab technology, available at ideaLAB:
http://www.innisfillibrary.ca/content/hacker-lab-technology

Interview with CBC Radio (Ontario Morning):
http://podcast.cbc.ca/mp3/podcasts/ontariomorning_20140903_42103.mp3a

Recent Library Brochures:
https://www.facebook.com/media/set/?set=a.503942229705167.1073741833.491302160969174&type=3

Innisfil Public Library Media Kit: https://www.dropbox.com/sh/j49orxxxf6atp4a/AAAVBAk-cMcux8jg9h10t8_0a?dl=0

Notable Blog Posts:
• “Hacker Ethic At The Library” - http://www.innisfillibrary.ca/content/hacker-ethnic-library
• “Story’s Big Idea” - http://www.innisfillibrary.ca/content/storys-big-idea
• “Summer Company Visits IPL” - http://www.innisfillibrary.ca/content/summer-company-visits-ipl
• “Kevin & Ben’s Big Idea” - http://www.innisfillibrary.ca/content/kevin-bens-big-idea
• “Tatiana’s Big Idea” - http://www.innisfillibrary.ca/content/tatianas-big-idea
• “Jessica’s Big Idea” - http://www.innisfillibrary.ca/content/jessicas-big-idea
• “3D Scanning at ideaLAB” - http://www.innisfillibrary.ca/content/3d-scanning-idealab
• “Making Things to Make Other Things” - http://www.innisfillibrary.ca/making-things-make-other-things

Articles:
• Library As Incubator: “Innisfil Public Library Resident Tinkerer” - http://www.libraryasincubatorproject.org/?p=12274
• HoOPLA: “Elements of a Helmet” - http://ola.informz.ca/InformzDataService/OnlineVersion/Public?mailingInstanceId=451845#n156967
• WebJunction: “Cultivating a Hacker Ethic: Digital Citizenship at Innisfil Public Library”
• The Innisfil Examiner: “Creating a buzz at ideaLAB” - http://virtual.thebarrieexaminer.com/doc/Barrie-Examiner/innisfilfeb142014/2014021301/#0

Videos:

• Supporting an Innovative Economy (Created by Innisfil Public Library for the Provincial Inter-Ministerial Public Library Discussion Forum, January 29, 2014, OLA Super Conference) https://www.youtube.com/watch?v=EhiM-GwsNHk&list=UUNGdjRIntQNjh40lmCnf2sA

• Innisfil Public Library’s Resident Tinkerer https://www.youtube.com/watch?v=-mLYKtqN58M&list=UUNGdjRIntQNjh40lmCnf2sA

• Digital Media Lab – Tech Talks https://www.youtube.com/watch?v=Bj07tTEQDhY&list=UUNGdjRIntQNjh40lmCnf2sA

• Maker Labs – Lie Detector https://www.youtube.com/watch?v=J8m9dVz862c&list=UUNGdjRIntQNjh40lmCnf2sA

Letter of support - Jamie Hardie, Hardie & Company - https://www.dropbox.com/sh/j49orzxrf6atp4a/AAAVBAk-cMcuX8jq9h10t8_0a?dl=0