CENGN

Fiscal Year 2018
April 1, 2017 - March 31, 2018

Our Vision

CENGN is the Centre of Excellence in Next Generation Networks. Our mission is to accelerate the growth of the Canadian Information and Communications Technology (ICT) sector, enabling economic strength and prosperity, as well as innovation and competitiveness in this high-growth global multi-trillion dollar industry.

Through our leading-edge technology infrastructure and expertise, as well as the creation of a globally recognized ecosystem of partners, CENGN helps Canadian small and medium enterprises (SMEs) overcome commercialization barriers and grow. CENGN collaborates with top ICT multinationals, the public sector, financial institutions, and academic partners, to solidify Canada's leadership in next generation networks for the benefit of all Canadians.

Accomplishments

40
SME Projects

1,510
Jobs Created*

$140M
Contributed to GDP*

23
Members & Partners

872
People Trained

118
Internships

*per Nordicity Group Limited

CENGN

Table of Contents

I am pleased to introduce the fourth annual report for CENGN, the Centre of Excellence in Next Generation Networks. I hope that this report will leave you with a sense of the high value CENGN provides to the Canadian ICT community, as well as the strength of the networking and technology ecosystem the organization supports and represents on a global scale. I truly believe that CENGN's mission to solidify Canada's leadership in next generation networks is key to the nation's economic development and will lead to a significant increase in highly qualified job opportunities for Canadian citizens.

The closing of FY 2018 marked the beginning of the fifth year of our initial Centres of Excellence for Commercialization and Research (CECR) Program from the Networks of Centres of Excellence (NCE). It also began a new chapter as we welcomed Jean-Charles Fahmy as our new President and CEO. Over the past four years, CENGN has matured its services, amplified its brand, and increased its impact on the Canadian ICT sector. FY 2018 was no exception as CENGN has more than doubled the accumulated metrics for SME projects and trained personnel. CENGN has also developed a new partnership with the Ontario Centres of Excellence (OCE) to carry out a $63 million Next Generation Networks Program (NGNP) on behalf of the Government of Ontario. This new 5-year program is a testament to our achievements so far and will allow CENGN to expand its services across Ontario to assist over 175 SMEs in commercializing their solutions on a global scale.

Training remains a key part of CENGN's mandate and it has been rewarding to see our student interns enter the workforce in highly qualified tech roles. By hosting over 100 internships, CENGN has created a talent pool of young professionals that can be seen joining tech companies big and small across the nation. It is our pleasure to watch them succeed in such a competitive industry and we hope they bring our emphasis on innovation and forward thinking with them on their long fruitful careers.

I would like to express my gratitude to all the people and organizations that are making CENGN such an effective force in the Canadian ICT sector. Crucial to the organization's continued success are our 12 member organizations that provide both in-kind and monetary support. Their contributions enable CENGN to exceed expectations in the delivery of its services and impact on the sector. Together with the support we receive from NCE and the Government of Ontario, they have allowed us to build an infrastructure that remains on the cutting edge of the industry's technology, with the flexibility and power to run proof-of-concept and scaling tests that will significantly help Canada's growing tech companies validate and commercialize their solutions. Thank you to the small businesses that continue to use our services, and to the academic institutions that emphasize the important skills and talent development in leading edge networking technology. Lastly, thank you to the hard working staff who continue to provide both the vision and the energy that drives CENGN forward.

Mike Scott
Chairman of the Board

The global ICT industry is experiencing significant change, driven by hyperscale demands for ubiquitous, flexible, and reliable connectivity to power our lives every day. The Canadian ICT sector is no exception, with disruptive technologies like cloud networking, LTE and 5G wireless, IoT, and SDN enabling the next generation networks that will be foundational for Canada's economic growth and prosperity, and to the quality of life for all. This is a tremendous opportunity for Canadian technology companies.

Realizing this potential will require the contributions and collaboration of all actors in the Canadian ecosystem. Small businesses and start-ups are the engine of innovation, and are consistently pushing the industry forward, while national and multinational technology leaders are looking to remain at the cutting edge and launch better product and service offerings. In order for Canada's ICT sector to thrive in a global competitive environment, it is imperative to pull together all the players of the industry – including the academic institutions that develop the relevant skills in a constantly evolving industry as well as the government and financial institutions that are crucial to support the growth of businesses – and nurture an ecosystem that drives growth.

CENGN has a unique position in this ecosystem. Our mission is to help Canadian small and medium enterprises overcome commercialization barriers and grow, through our leading-edge technology infrastructure and expertise, and the creation of a globally recognized ecosystem of partners. We have seen the significant positive impact of our contribution on the development and sustainability of the ICT sector in Canada. CENGN has already created over 1500 jobs and contributed $140M in GDP (Nordicity, March 2018).

I joined CENGN only recently and I already see that through the strength and dedication of our team, CENGN has the potential to amplify its impact even further. We continue to work with SMEs from Vancouver to St John's, and across all industry verticals. For example, in the last year we conducted projects in eHealth, proving readiness of Studio 1 Labs' intelligent bedsheet solution for hospital deployments; smart agriculture, validating the functionality of Ukko Agro's crop monitoring solution and enabling a commercial opportunity with one of CENGN's members; and network monitoring, validating and providing exposure for VirTool Networks' OpenStack environment troubleshooting Virtual Network Analyzer. In one of the company's biggest highlights in FY 2018, CENGN confirmed plans to carry out the Next Generation Network Program (NGNP). This program will enhance our reach and accessibility across Ontario and aims to provide the resources and services necessary for over 175 SMEs to overcome commercialization barriers. The program will also increase Ontario's talent pool of networking professionals, making it that much more enticing for businesses of all sizes to remain in the province as they grow and need to hire more qualified workers.

This annual report will give you a good perspective on the important work being done by CENGN with the support of our members and partners. The ICT sector is strategic for Canada's economic strength, availability of highly qualified jobs, and competitiveness in global markets. CENGN's goal is to be a guiding force for the industry, as well as an engine to help SMEs commercialize their technology and grow to become the next industry leaders.

Jean-Charles Fahmy
President and CEO

Board of Directors

Mike Scott
Chairman

Chris Bachalo
Global Director Cloud Solutions
at Juniper Networks

Sam Bucci
IP Transport Business Division
at Nokia

Sandra Crocker
Strategic Initiatives & Operations
at Carleton University

Code Cubitt
Managing Director at Mistral
Venture Partners

Robert Fitts
Director of Corporate
Development at EXFO Inc

Sacha Gera
SVP, Cloud Products at Kandy.io

Joe Hickey
President and CEO at
Rock Networks

Al Hurren
Vice President of Research &
Development at Mitel

Rob Keates
Manager of IP/Optical Standards
at Telus

Mike McGann
Senior Vice-President, Financial
Advisor at Raymond James Ltd

Matt Pearson
Ottawa Leader of SR&ED and
Business Incentives at Ernst &
Young

Stephanie Ratza
Independent Advisor

Steven Wood
Principal Engineer - Enterprise
Architecture and Software-
Defined WAN at Cisco

Peter Wilenius
Vice President of Business
Development at CANARIE Inc.

CENGN

CENGN's mission is supported by the NCE's CECR Program and the Government of Ontario's NGNP (Next Generation Network Program). Through each program's support and funding, CENGN is able to provide its services to businesses across Ontario and throughout Canada. Both programs are designed to promote economic strength and prosperity in our ICT sector.
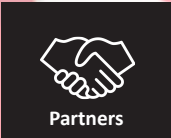
SME Projects

Internships
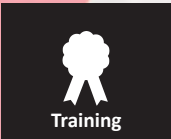
Training

Members

Partners

Non-CECR Revenue

Canada

The CECR Program focuses on connecting innovation in Canada to the country's best sources of research, development, and commercialization. CENGN was created as a CECR Program to bridge the gap between innovation and commercialization in networking and ICT.

Funding via:

NCE RCE

Ontario

The NGNP supports the province's innovation ecosystem through its focus on the expansion of digital infrastructure across Ontario, development of talent and high-quality ICT jobs, and the overall enrichment of Ontario's global competitiveness. CENGN has successfully completed one year of the 5-year plan, which emphasizes SME networking solutions that will improve all sectors, including Rural and Northern Ontario, Smart Agriculture and Smart Mining.

SME Projects
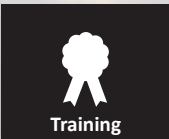
Internships

Training

Northern Projects

Rural Projects

Smart Ag

Smart Mining

Funding via: **Ontario Centres of Excellence**
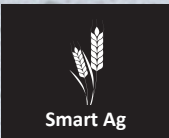
CENGN draws its strength from the combined contributions and commitments of its members. Members provide their expertise and commercial offerings to CENGN, which in turn creates services and infrastructure for SMEs to test their solutions and overcome barriers to market. Being a member of CENGN means working together to ensure the growth and sustainability of the communications industry in Canada and solidifying our country's leadership in next generation networking.

Member Benefits

Access to a pipeline of complimentary technology & solutions

Access to a talent pool of trained professionals

Co-creation and incubation opportunities

Connectivity to the innovation ecosystem

Brand exposure

$2B
of Canadian R&D Investment by Members

Building Multicloud Together
Open. Connected. Secure.

Every year CENGN brings in approximately 40 students from Canadian universities to gain hands-on experience in the fields of engineering, project management, marketing, administration, HR, and finance. Before making their mark, each student participates in the CENGN bootcamp, equipping them with the skills they need to succeed. These bright minds are what allows CENGN to build a talent pool of young professionals that is second to none!
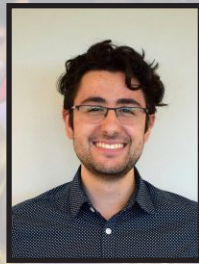
118
Internships

97%
Employment Rate

Student Spotlights

Sneha Sunny George
Willis College
Cloud Services Engineer
Women in Technology Award
Currently working at Nokia

David Seccareccia
Concordia University
Computer Network Engineer
Co-op Employers' Choice Award
Currently working at Mannarino
Systems and Software Inc.

Sam Robillard
Carleton University
Cloud Infrastructure Engineer
Carleton Co-op Recognition
Currently working at Nokia

Lana-Marie Souaid
Algonquin College
Marketing Specialist Student
Co-op Student Recognition
Currently working at DIGITAL Inc.

UNIVERSITY OF ALBERTA

ALGONQUIN COLLEGE

Ashbury COLLEGE

Brock University

UNIVERSITY OF CALGARY

Carleton UNIVERSITY

Concordia UNIVERSITÉ UNIVERSITY

DALHOUSIE UNIVERSITY
Inspiring Minds

Georgian

UNIVERSITY of GUELPH

Lambton College

UNIVERSITÉ LAVAL

McGill

McMaster University

Queen's UNIVERSITY

uOttawa

RYERSON UNIVERSITY

UNIVERSITY OF TORONTO

University of Victoria

UNIVERSITY OF WATERLOO

WILLIS COLLEGE
BUSINESS • TECHNOLOGY • HEALTHCARE

YORK UNIVERSITÉ UNIVERSITY

Industry Associations and Partners

Our partners are integral to the services we provide at CENGN. We have also built strong connections with many industry associations, including projects using open source technologies. These technologies have been integrated into our infrastructure to ensure that our services remain cutting edge and valuable to our users. Below are some highlighted global associations and partners CENGN works with to ensure it remains on the leading edge of the next generation of networking.

The European Telecommunication Standard Institute produces more than 2000 standards for the telecom industry each year. With more than 700 member organizations, over 62 countries are represented by ETSI. CENGN focuses on the ISG (Industry Specifications Group) for NFV to use the latest requirements and architecture specifications for hardware and software infrastructure needed to validate virtualized functions.

The OpenStack Foundation promotes the global development, distribution, and adoption of open infrastructure with more than 82K community members from 187 countries around the world. It was formed in 2012 to provide an independent home for the OpenStack cloud operating system and has since become one of the largest and most diverse open source projects in history. CENGN has expertise in designing and deploying SDN-based Openstack NFVi instances from both open source projects like Helm using Kubernetes as well as vendor-based solutions including WindRiver Titanium or Juniper Contrail.

The Linux Foundation supports the creation of sustainable open source ecosystems by providing financial and intellectual resources, infrastructure, services, events, and training. Working together, The Linux Foundation and its projects form the most ambitious and successful investment in the creation of shared technology. Through our mandate of innovation in the networking industry, CENGN contributes to The Linux Foundation Networking umbrella projects; FD.io, ONAP, OpenDaylight, OPNFV, SNAS, and Tungsten Fabric.
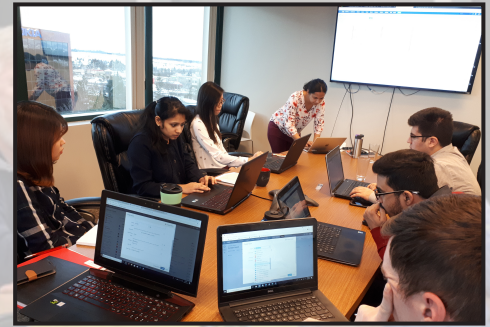
CENGN is training the next generation of networking professionals by utilizing its own talented team, leveraging the resources of its members, and partnering with best in class companies. Through multiple avenues of knowledge sharing and training, CENGN is devoted to providing its expertise in current networking trends and technological advancements.

Technical Sessions

CENGN experts attend events around the world to share their insight into the latest developments in networking technology. Through these presentations, we challenge Canadians to find new opportunities in the ICT sector and provide value to those working on NGN's most relevant issues.

Academic Training

CENGN builds lasting training connections between its members and academic partners. Through these connections, students gain access to off-the-shelf technology owned by our members in order to augment their academic learnings of next generation networks.

872
People Trained

As a strong advocate of community building, CENGN uses meetup groups to bring together like-minded professionals for discussion and collaboration on recent innovations in networking. In addition to strengthening the skills of experienced attendees, the meetups are designed to connect and inspire students and professionals alike.

CENGN provides hands-on workshops that focus on important networking concepts including Software Defined Networking (SDN) and Network Function Virtualization (NFV). CENGN often collaborates with other organizations and companies to offer technical deep-dives into the networking tools of today and tomorrow.

Workshops

Meetups

CENGN

Canada in the Global ICT Market

$5.5T
projected global ICT spending by 2020

450K
globally operational SD-WAN sites by 2020

1 in 5
global enterprises rely on a public cloud platform

69%
of Canadian tech firms have only 1-4 employees

7.1%
of Canada's total economic output is from the tech sector

71 K
technology companies across Canada

45%
of Canada's GDP in ICT is from Ontario

CENGN

ICT Today and Tomorrow

Over the past decade the ICT sector has seen incredible growth and it does not seem to be slowing down. The world is becoming increasingly connected, which has created an expanding appetite for faster network connectivity and higher bandwidth. This has enabled new services as industries have been completely transformed in order to capitalize on digital technology in the areas of cloud, IoT, SDN/NFV, networking, and cybersecurity. In the coming years, small and large companies across the globe will be looking to supply this demand and it is important that Canadian companies have the resources to access these markets.

Global spending on public cloud services from 2018 to 2021 will increase from

$186 B to $277 B

Cloud Computing
Companies with 1-25 or 1000+ employees have the highest adoption rates of cloud computing

$6 T
Annual estimated cybercrime damage by 2021

$70 B
Global NFV market size by 2024

CENGN

CENGN has provided services to growing businesses from coast to coast...

ABsoft
Research and solutions for connected devices.

MARTELLO

kontron

Enghouse
Networks

breqwatr

NoviFlow
switching made smarter

CRYPTO4A

UKKO AGRO

"CENGN was pivotal in running our first full Proof-of-Concept on their testbed and on the eleven-x wireless network. They also brought visibility to our company that resulted in commercial opportunities through their Member, TELUS."
- Ketan Kaushish, CEO of Ukko Agro

Idx

cheetah
NETWORKS

eleven-x

CORSA

INTERSET

STUDIO 1 LABS

inBay
TECHNOLOGIES INC.

intervyoo.me

INOCYBE
TECHNOLOGIES

SMART
PARKING AP

CENGN

40
SME Projects

INFOSEC GLOBAL

SMATS

ap1

LoginTC

Expeto

cenx

SMARTSHAPE

NOC LAND

MAPLE Microsystems

Leonovus

EION WIRELESS

SRC SOLUTION

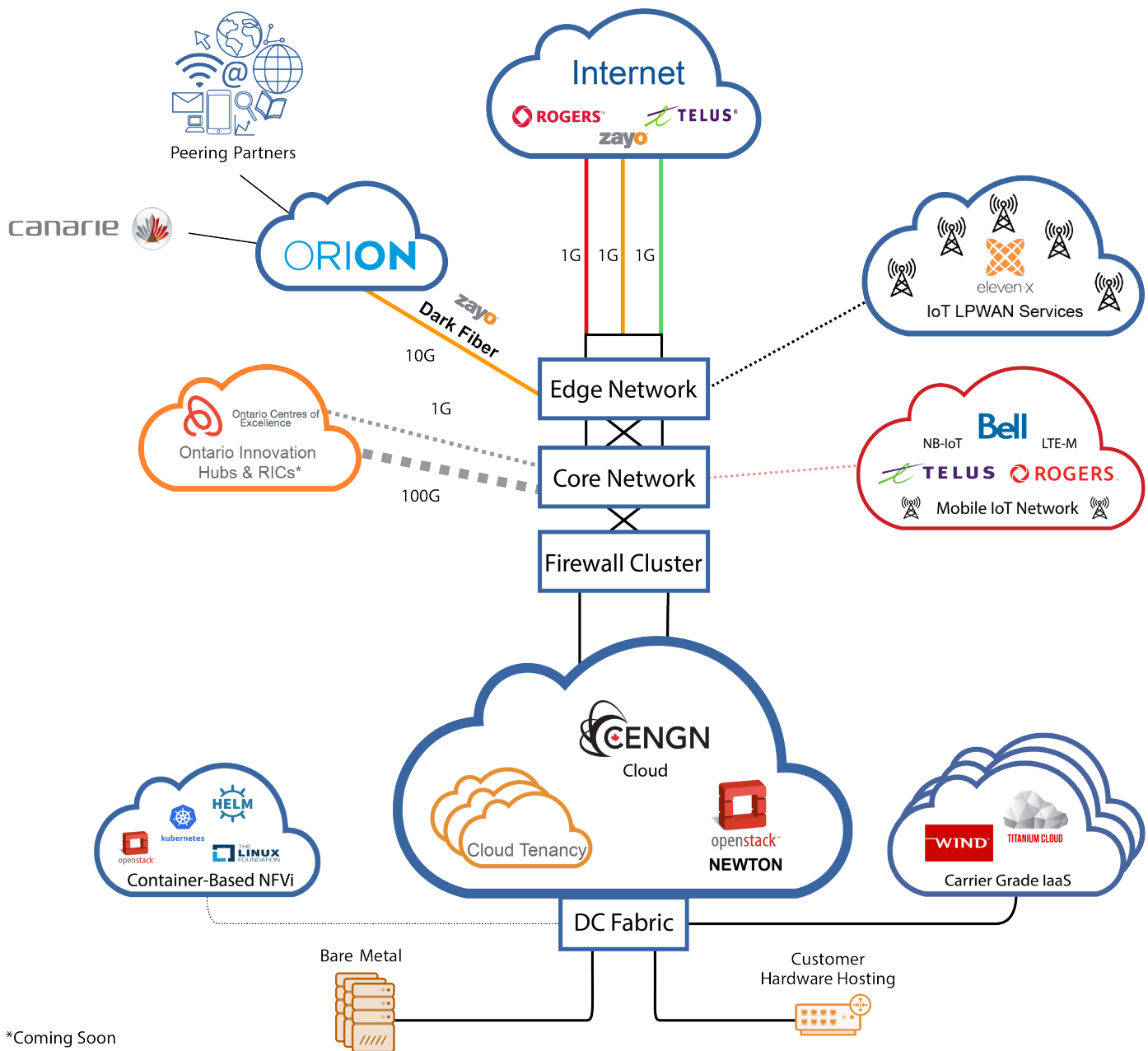**CloudOps**

SOLANA NETWORKS

"We've worked with CENGN several times over the last few years. As a result, we have been able to bring better products to market more quickly. Our relationship with CENGN has also led to a important partnership with a CENGN Member."
- Biswajit Nandy, CTO of Solana Networks

STREAMSCAN

MARCH networks

All CENGN projects are carried out through the CENGN infrastructure. This testbed employs interoperability between software, hardware, and a multitude of products from many different vendors. Our unique multi-vendor physical and virtualized lab enables companies to test and validate new and emerging SDN and NFV technologies, applications, and services before moving them to production.

Peering Partners

canarie

ORION

Internet
ROGERS TELUS
zayo

1G 1G 1G

Dark Fiber
zayo
10G
1G

Ontario Centres of Excellence
Ontario Innovation Hubs & RICs*

100G

Edge Network

Core Network

Firewall Cluster

IoT LPWAN Services
eleven-x

NB-IoT Bell LTE-M
TELUS ROGERS
Mobile IoT Network

CENGN
Cloud

Container-Based NFVi
HELM
kubernetes
openstack THE LINUX FOUNDATION

Cloud Tenancy

openstack
NEWTON

WIND TITANIUM CLOUD
Carrier Grade IaaS

DC Fabric

Bare Metal

Customer Hardware Hosting

*Coming Soon

Have a project idea? Email us at **services@cengn.ca** to start a conversation

CENGN

CENGN conducts collaborative SME projects to accelerate the commercialization of innovative technologies and remove barriers to product introduction to the marketplace. Our business support, technical expertise, infrastructure, and infrastructure services are offered for all of our projects. CENGN projects can be separated into seven distinct categories of networking:

SDN | NFV | SD-WAN
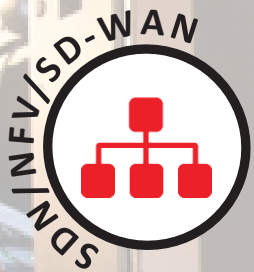
SDN and NFV are complementary technologies that transform network infrastructures to be intelligently and centrally controlled. Software-defined wide area networks (SD-WAN), on the other hand, provide orchestration, cloud-based WAN automation, and remove the burden of manual WAN configuration and provisioning.

INTERNET OF THINGS

IoT refers to the ever-growing network of devices for internet connectivity and the communication that occurs between internet enabled devices and systems – your cellphone, tablet, and smart car all talking to one another. IoT in networking refers to how devices are sensed or controlled across infrastructure.

DATA CENTRE & CLOUD

Data centres are facilities that consist of physical and virtual network elements (compute/controller nodes, storage nodes, routers, switches, firewalls, etc.), which can be leveraged to build and deploy cloud platforms. Cloud platforms are virtualized network infrastructures that deliver resources such as virtual servers, databases, applications and other network services, to end users or tenants over the internet.
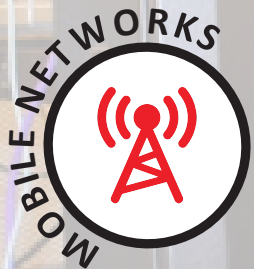
SECURITY

Virtual security encompasses the tools and programs used to protect the identity, assets, and technology of individuals and organizations. Today's cloud solutions and IoT applications require security technology that effectively prevents increasingly dynamic cyber-attacks.

MOBILE NETWORKS

Mobile networks are communication networks where the last link is wireless – like a cellular radio tower connecting a voice and data network to your cellphone. Projects in this area usually involve wireless network integration, cellular connectivity in remote areas, and resource management of a mobile broadband network.

NETWORK TRANSPORT

The transport layer of a network provides host-to-host communication services for applications. Network transport is complex, and requires multiple operational support systems to build, provision, operate and maintain.

NETWORK APPLICATIONS

As network functions become virtualized and increasingly software-defined, new applications need to be developed to support them. These network applications have advanced analytics that enable real-time decision making and support operations with discovery, monitoring and troubleshooting.

NETWORK APPLICATIONS

Testing/Monitoring

### Validating NOCLAND's Network Management System on OpenStack

NOCLAND is the Newfoundland-based developer of NOCView, a cloud-based network management platform that collects resource utilization metrics to report on network performance and health. NOCView was developed as an additional service for NOCLAND to access new customers that are not prospects for their standard offerings.

NOCLAND saw an opportunity to expand into the OpenStack cloud market with NOCView. To do this, they would need validation that their solution successfully operates in an OpenStack environment. However, creating these facilities or paying public cloud providers can be resource intensive for small and medium enterprises. Completing a project at CENGN provided NOCLAND with a pre-configured infrastructure and technical resources so their engineering team could focus on product testing and development. Demonstrating successful deployment of NOCView at CENGN has broadened the market potential of NOCLAND and proved to prospective customers that NOCView is ready for market.
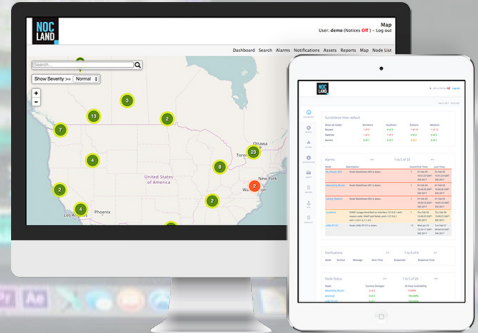
INTERNET OF THINGS (IoT)

eHealth

Studio 1 Labs Determines Performance of Intelligent Bedsheet When Scaled

The intelligent bedsheet by Studio 1 Labs is an IoT clinical-grade solution that monitors heart rate, respiration, location, and position of patients. The bedsheets collect data through embedded sensors in the fabric and distributes the information through a private network for data processing and reporting to medical personnel.

Studio 1 Labs was looking to understand the server requirements needed to support their application early on in their sales cycle. With the provision of bare metal servers from CENGN, Studio 1 Labs was able to determine the requirements for servers to identify and resolve a number of unforeseen bottlenecks in their data flow. The results from the project has better prepared Studio 1 Labs for when Alpha and Beta versions deploy to early adopters. Since their project at CENGN, Studio 1 Labs completed several trials across the globe and received an offer of $6M for their intellectual property.

CENGN

🔒 SECURITY

Performance Testing of Interset's Cybersecurity Solution

The Security Analytics solution from Interset allows companies to better protect themselves from cybersecurity threats by automatically filtering through threat alerts and prioritizing the ones that matter most. Over 350+ machine learning models are used by Interset to analyze the complete event context of a threat or security breach.
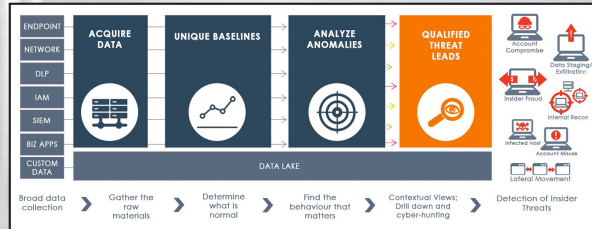
Interset closed their largest sale to date with a large defense sector firm. As they had never served a customer of this size, they were uncertain on how to guide the customer on server requirements for running the Interset solution. CENGN assembled a high-performance server cluster for Interset to stress test their solution to the same levels they would experience with their customer. As a result of the project, Interset was able to confidently recommend a hardware configuration to their customer. Following their first project, Interset rearchitected parts of their security analytics engine and then returned to CENGN for a second project where the events processed per second increased 450%. Interset was then able to show customers that an even larger deployment would now be possible with the same hardware, substantially improving the ROI.

☁ DATA CENTRE & CLOUD

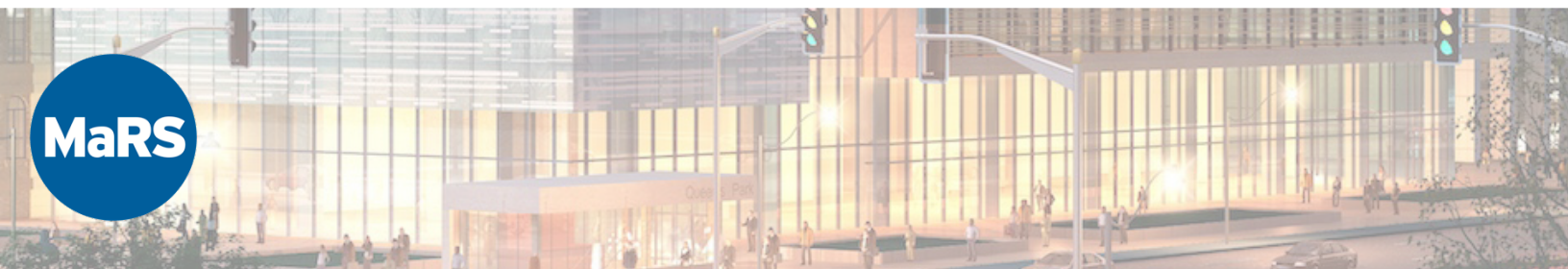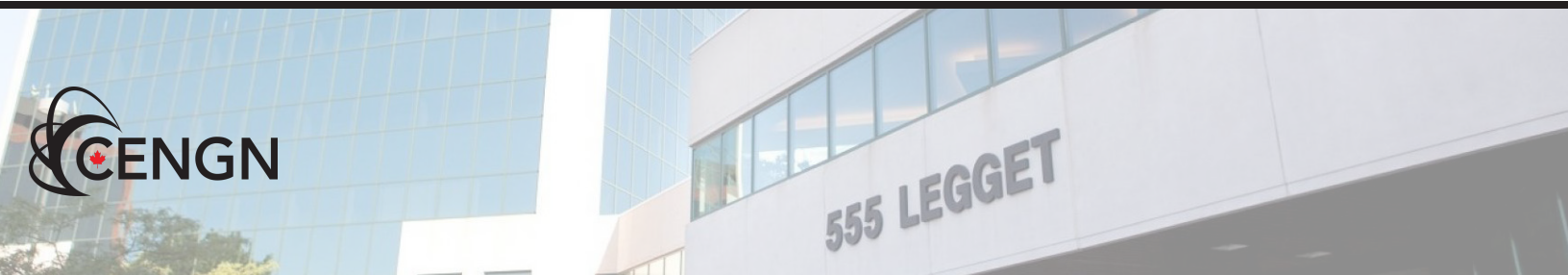## Breqwatr Validates its Private Cloud Appliances as a Virtual Customer Premises Equipment Solution

Breqwatr is a turn-key private cloud appliance that combines web-scale engineering with consumer-grade design to provide the capability and promise of the public cloud in a simple to use on-premise appliance. Breqwatr's Cloud Appliance integrated hardware and software solution unifies compute, storage, and network with a curated version of OpenStack that is customizable to the needs of each individual client.

Breqwatr's Cloud Appliance (BCA) was deployed on the CENGN infrastructure and utilized hardware hosting and cloud tenancy services. The next phase involved using five different vendor virtual network functions to demonstrate easy deployment and normal functionality for clients in any corporate or small office environments. Breqwatr proved that their BCA is a capable virtual Customer Premises Equipment (vCPE) solution. In addition, Brewatr received experience working with each vCPE application and received documented steps for provisioning their solution with future customers.

Next Generation Network Program

CENGN is currently carrying out the Next Generation Network Program (NGNP) in partnership with the Ontario Centres of Excellence (OCE). This program was made possible through a $63 million contribution by the Ontario government, which has enabled CENGN the opportunity to expand its services to growing Canadian companies across the province.

The NGNP will see CENGN grow its testing infrastructure across four innovation hubs as well as allow the CENGN Testbed to be accessed from regional innovation centres throughout Ontario. The expansion will provide businesses the opportunity to leverage CENGN's next generation infrastructure services and ensure the commercialization of innovations across a variety of sectors. The end goal of the program is to foster industry growth and an increased number of high-calibre jobs through business services and talent development, ultimately solidifying the robustness of the networking and ICT sector in Ontario.

The CENGN expansion across Ontario will see four innovation hubs, CENGN HQ, Invest Ottawa, MaRS, and Communitech, host hyper-connected data centres in the four major networking regions of the province (Kanata, Ottawa, Toronto, and Waterloo). Beyond this, the CENGN infrastructure will be connected to Regional Innovation Centres throughout Ontario. Not only will the expansion extend accessibility of CENGN services throughout the province, it will also increase the capacity of CENGN projects and the infrastructure's overall capabilities.
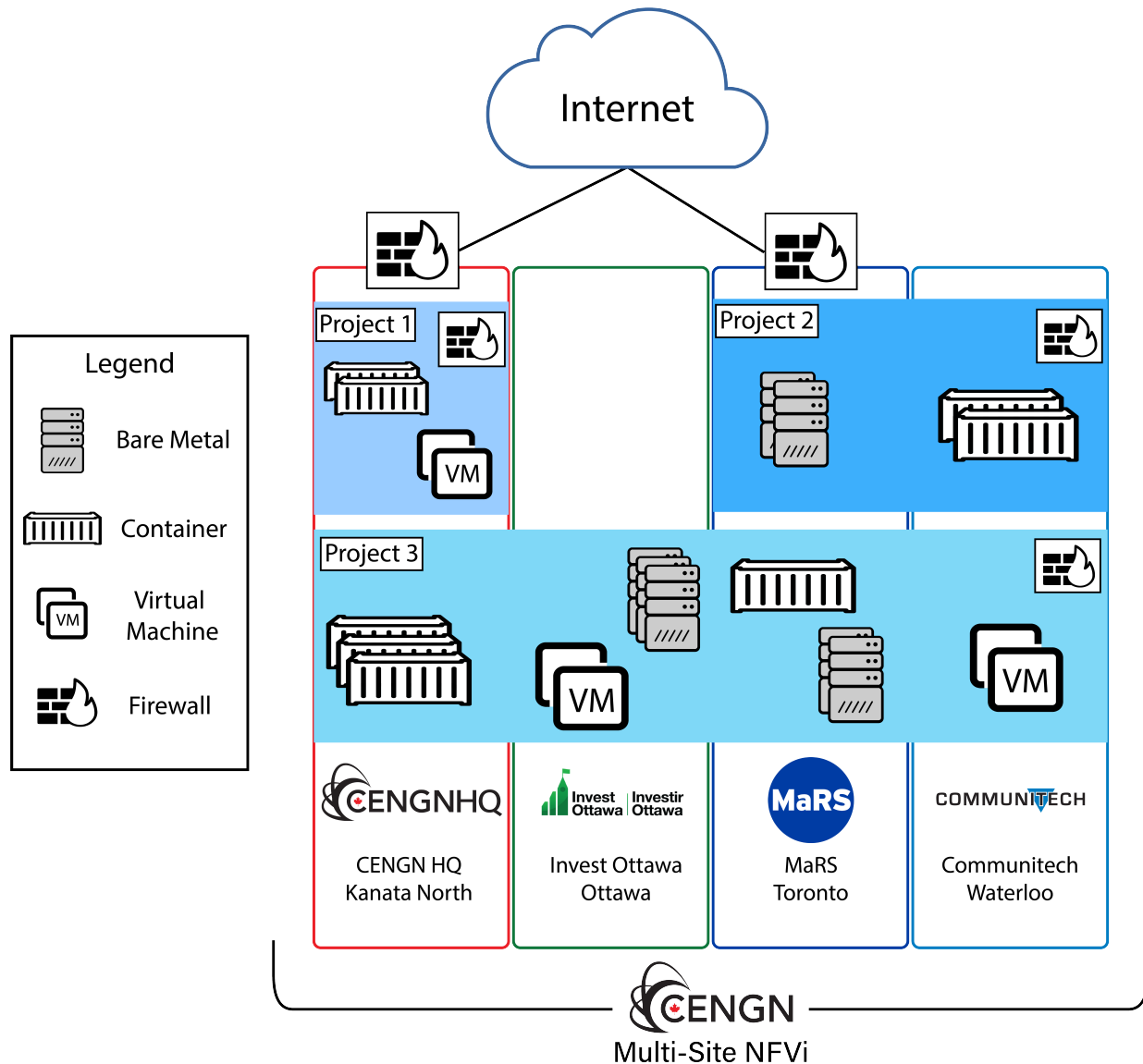
As shown above, CENGN projects will be provided through sofware-defined network slices of the CENGN Infrastructure, where they will receive the pieces (VMs, bare metal, containers) they need to complete their testing. With the completion of the infrastructure expansion, each slice will be able to utilize resources across a multi-site NFVi, that is securely programmable from both outside CENGN and internally.
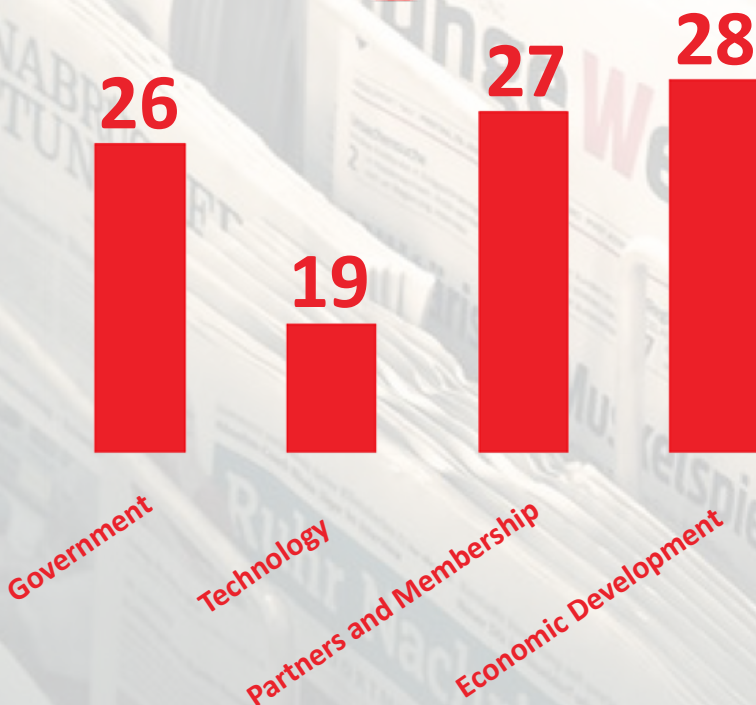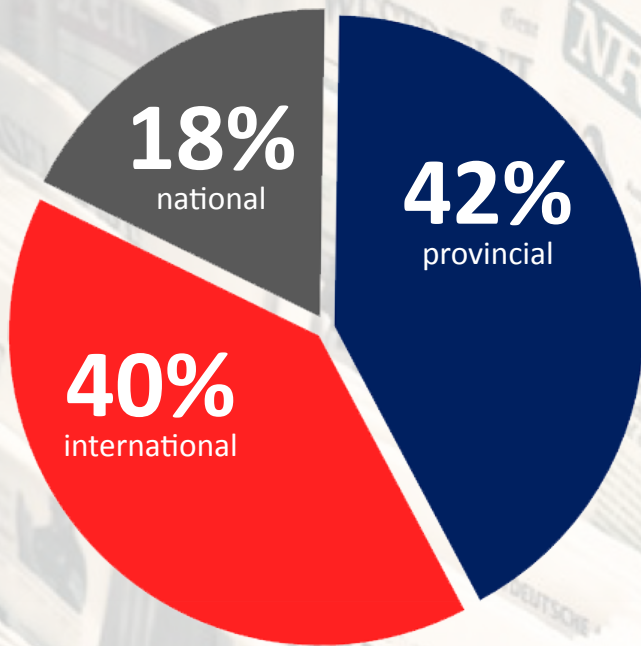
Website and Social Media

CENGN uses its website, social media, and newsletters as tools to stay engaged with its Canadian and international following and to grow its outreach in new target segments across the country. CENGN's followers include both technical and business professionals from top multinational organizations and Canadian small and medium enterprises, as well as leaders of the industry, not-for-profits, and researchers. In FY 2018, CENGN saw 524,900 twitter impressions, 122,620 website visits, and an open rate of 26% of the 21,474 newsletters sent out during the year. We also saw significant growth of followers and engagement from last year on all other platforms.

+65%

+92%

+437%

+23%

+15%
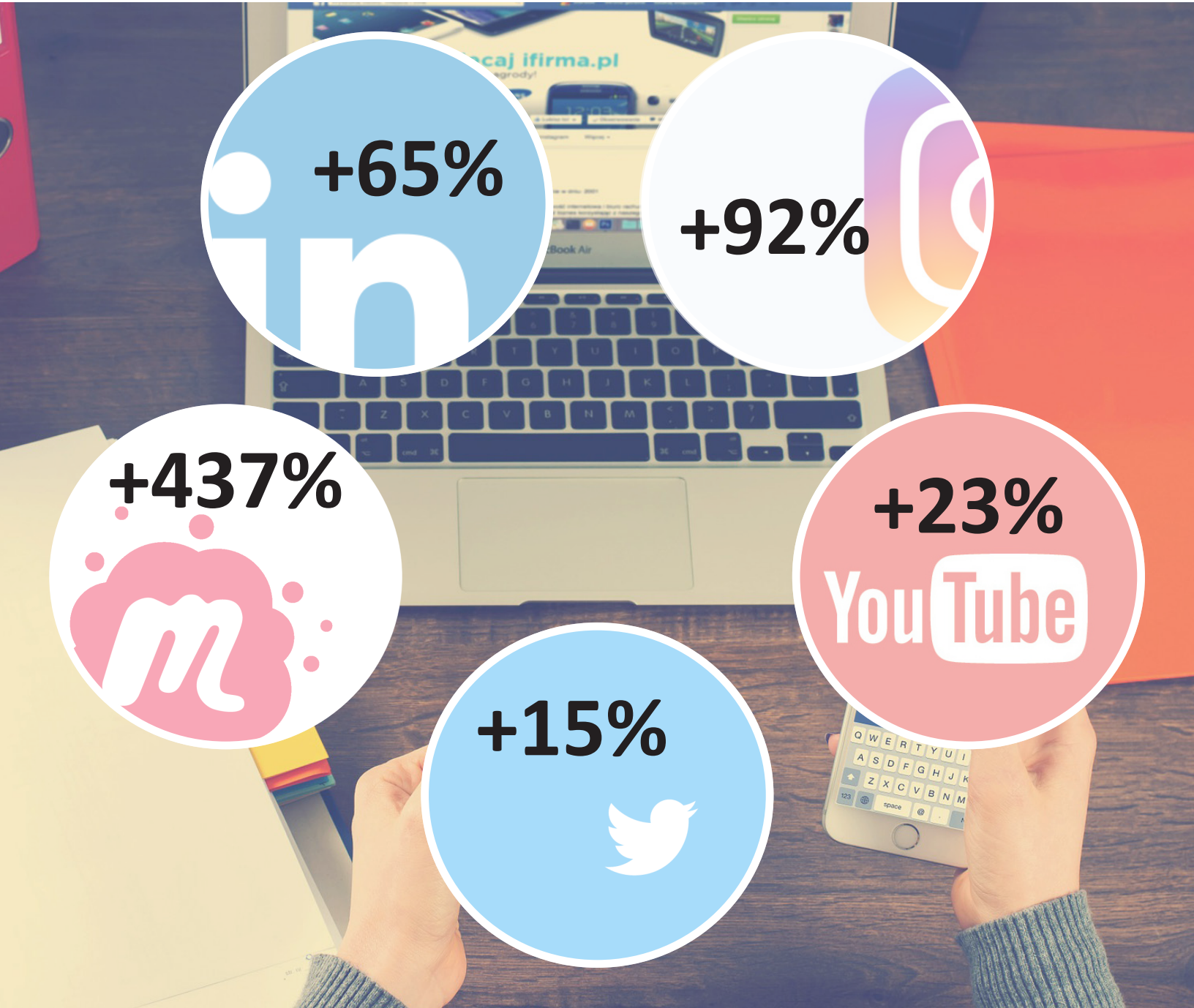
CENGN

During Fiscal Year 2018, CENGN appeared in the media approximately 100 times, being featured in articles from a variety of provincial, national and international sources. The breakdown of the coverage is: 42% provincial, 40% international, and 18% national.

18% national

42% provincial

40% international

26
Government

19
Technology

27
Partners and Membership

28
Economic Development

"CENGN's goal is to strengthen Canada's leadership in global ICT and next generation networking. By partnering with eleven-x, CENGN will be able to leverage eleven-x's technology to enable SMEs to test their products and services in the CENGN environment, and accelerate their time to market."
-Market Wired / May 2017

"By implementing a dynamic smart infrastructure, cities will be able to optimize the management of communication and information flow for community services like schools, transportation systems, hospitals, power, water, waste management and law enforcement.... With the collaboration of CENGN, Juniper and Inocybe, we're one step closer to realizing the benefits of a smart city infrastructure in terms of safety, convenience, environmental impact and prosperity." -NCE / June 2017

"CENGN bridges the gap between research and commercialization.... The Ontario government anticipates the program will assist SMEs to capitalize on opportunities in emerging fields, such as autonomous vehicles, aerospace, public safety, cybersecurity, ICT, mining, eHealth and smart agriculture."
-Research Money / February 2018

"CENGN is a consortium of member organizations that have set aside marketplace rivalries to support commercialization in Canada. Small- and medium-sized enterprises (SMEs) sign into its e-network to play in a very enticing sandbox, alongside innovators in academia, industry, and research."
-Serious Tech Lives Here / February 2018

Event Highlights

78 Events

Open Networking Summit – Santa Clara, CA

OPNFV Plugfest 2017 – Chatillon, France

OpenStack Summit – Boston, MA

ORION Think – Toronto

OPNFV Summit – Beijing, China

Driving Dreams – Mississauga

MWC Americas – San Francisco, CA

Carleton U Fall Career Fair – Ottawa

Open Stack Day Canada 2017 – Ottawa

Nova Communications Conference 2017 – Nova Scotia

Beyond Entertainment 2017 – Ottawa

Canadian ISP Summit 2017 – Toronto

CANARIE Summit – Ottawa

PolicyBrew Panel Discussion – Ottawa

CISCO Live Barcelona 2018 – Barcelona, Spain

Cyber Security Meetup – Ottawa

Big Data & Cyber Security Conference – Ottawa

MWC Barcelona 2018 – Barcelona, Spain

ONS Summit 2018 – Los Angeles, CA

Fall OpenStack Meetup – Ottawa

Juniper Boot Camp Training – Toronto

Wavefront Summit – Toronto

OCE Discovery – Toronto

Spring OpenStack Meetup – Ottawa

Summer Open Source Networking Meetup – Ottawa

Open Source Summit 2017 – Los Angeles, CA

Digital Health Summit – Ottawa

CISCO Connect – Toronto

Startup Canada Day on the Hill 2017 – Ottawa

Women in Com Tech Breakfast – Ottawa

Summer Kubernetes Meetup – Ottawa

Innovation York 2017 – Toronto

OPNFV Plugfest Oregon 2017 – Hillsboro, OR

Docker and Kubernetes Hands on Workshop – Ottawa

5G Canada 2018 – Ottawa

Reactive Data Meetup 2018 – Kanata

Juniper Boot Camp Training – Halifax, NS

OWASP Ottawa – Ottawa

TECHNATA 2018 – Ottawa

Bold - Presented at, sponsored or hosted event

CENGN

CENGN Summit 2017

Open Infrastructure Powering the Digital Economy

CENGN Summit 2017 delved into how to harness transformative network technologies to drive growth in Canada. The Summit was a full-day event that brought together industry members, academia, and government associations to discuss and learn more about the impacts of emerging trends in IoT, 5G, AI, and opensource networking on Canadian business and way of life.

9% government

22% academia

64% industry

6% non-profit
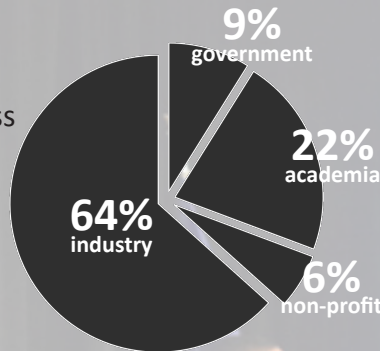
This year's topics:

Innovation in business

Driving open cloud solutions in Canada

The transformation path to 5G and large scale IoT

THOUGHT LEADERSHIP

Bell · breqwatr · canarie · eleven-x · EXFO · GEORGE BROWN COLLEGE · IBM · IHS Markit · Invest Ottawa · Investir Ottawa · JUNIPER NETWORKS · Mistral VENTURE PARTNERS · Mitel · NOC LAND · Ontario · RBC · TELUS · WIND

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