

The SHIELD Score Nokia Contribution

Sovereignty by Design

Investment under review: Federal government's \$40 million contribution to Nokia's Ottawa

Research and Development Facility

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Subject: The Federal Government's \$40 million contribution to Nokia gets a 6/10 on the

SHIELD Sovereignty Score

TL;DR: Government got it half right but is leaving value on the table to be siphoned away.

The \$40 million contribution to Nokia's Ottawa R&D facility gets a 6/10 on the <u>SHIELD</u> <u>Sovereignty Score.</u>¹ On the one hand, the contribution tilts Canada's 5G technology away from American and Chinese providers, supports human capital formation and utilization and contributes to innovative technologies that will benefit consumers. On the other hand, the resulting Canadian innovations will be owned by a foreign multinational that holds substantial corporate power in the industry.

The SHIELD Sovereignty Score is a practical framework to evaluate policy decisions for sovereignty and economic transformation. The framework turns policy promises into testable choices, showing if and how a policy decision shifts control, competition or value towards Canada.

The Policy

Last week, Government of Canada representatives <u>attended a groundbreaking</u> ceremony celebrating a \$40 million contribution to Nokia's Ottawa research and development facility. The provincial government provided an additional <u>\$30 million and the City of Ottawa</u> another \$2 million.

The policy <u>decision was made in 2022</u> when the Canadian government was in the process of <u>prohibiting</u> Canadian telecommunications service providers from deploying Huawei and ZTE products and services in their 5G networks.^{4,5} This was an <u>important push for greater sovereignty</u> amid fears of infrastructure control by the Chinese State.⁶ In that context, this decision was a step in the right direction.

The groundbreaking could have very easily gone unnoticed, but Artificial Intelligence and Digital Innovation Minister, Evan Solomon, made it a very public event and described the project as a sovereignty success <u>stating</u>, "*This is what sovereign AI looks like in practice*." He went on to say that "Sovereign AI means supporting Canadian innovation, working with allies, ensuring



resilience, ensuring security, and building our digital infrastructure." But we are concerned that there is very little policy in place to ensure that the benefits of the Canadian and Ontario government investments will deliver the full value possible to the people of Canada or Canada's economy.

Why this decision matters

Once complete, Nokia's new R&D campus will employ approximately 2,500 people in the Ottawa region focused on advancing 6G technologies, quantum computing and digital connectivity. By It is expected that the innovations from this campus will provide Canada's Telcos with 5G and <a href="mailto:eventually 6G, Al-RAN, and quantum infrastructure. These are highly technical job opportunities, concentrated on advancing research and development in key technologies where Canada has a clear advantage. Nokia is positioning itself to work closely with the Government of Canada and the Department of National Defence, using the Ottawa Campus upgrades to deliver innovative defence related 5G applications. These are highly technical positions are highly technical positions of the control of the

In 2022, when this decision was made, the choice to contribute to the Nokia campus would have been seen as an important step towards enhancing economic and digital security. The government had prohibited Canadian telcos from utilizing technology from Huawei or ZTE and was working to solidify the next generation of Canadian invention and innovation with more trusted corporations.

There are many bad reasons to fund a foreign corporation, but there are good reasons too. For example, it is unclear to us if there is a Canadian company that could do the R&D work that Nokia promises to do. In fact, the current Nokia Campus was, at one time, a fully <u>Canadian company</u> called Newbridge Networks which was eventually acquired by Nokia after multiple sales to different multinationals. The fact that the campus is no longer Canadian-owned points directly to past policy failures that we need to end moving forward. This decision serves as an important reminder that once the results of Canada's ingenuity have been sold off it is hard to retake market share.

What does Sovereign mean, anyway?

The AI and Digital Innovation Minister's <u>use of phrases like</u> "This is literally the very definition of what it means to be a strong, sovereign nation" is concerning.¹⁴ In his speech, Minister Solomon made some important points about what he thinks is sovereign about the facility including working with allies, ensuring resilience and building digital infrastructure. These points may be true but that is not the full definition of sovereignty.

The government needs to be focussed on making these true investments instead of just subsidies. Past policy practice has been to focus almost solely on job creation while leaving out other important aspects of the value chain. Job creation and human capital formation are important outcomes that must be required as part of these types of projects, but jobs are not the <u>full spectrum of value</u> created. For projects with foreign companies, which we think can bring important value when done well, the government needs to ensure there are returns to Canadians in addition to the jobs the company brings to the table.

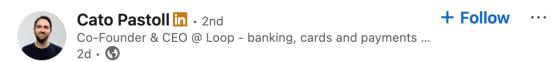
For example, companies like Nokia partner with researchers at Canadian universities and access R&D funding to build innovations. This is an important part of the process. Unfortunately, any patents or other IP that is created is often owned by the commercializing entity instead of by



the research institution. ¹⁶ That means any profits from the product or from future licensing of IP are delivered directly to the foreign firm. <u>Licensing IP</u> generates significant revenue for Nokia. ¹⁷

Value could also be delivered by insisting on an ownership stake in the company or making this a repayable loan instead of a grant. The Finnish government is one of Nokia's <u>largest shareholders</u>. ¹⁸ For all the value Nokia captures from Canadian investments in education, science, R&D and directly in their company, Canada could be reaping more benefits. Less than half a per cent <u>of the company shares</u> are owned by Canadian investors. ¹⁹

Public Reaction to the Policy Choice



The Canadian Government just announced they're pouring \$70M into Nokia's new Ottawa campus after a year of spending \$0 on meaningful support for Canadian SMBs.

Make that make sense.

Here's the reality: Canadian businesses are the ones that are going to create long-term economic value and prosperity for Canada. They're the ones building teams here, pushing the real boundaries of innovation, and fighting to keep ownership in Canada. Yet they continue to be chronically under supported by our government and financial institutions.

Putting \$70M into a foreign player means \$70M not going toward Canadian brands expanding internationally, local manufacturers investing in automation, or tech entrepreneurs hustling to build the next global company from the ground up.

LinkedIn: Cato Pastoll, Co-Founder and CEO of Loop, provides commentary on the Nokia investment impact on Canadian small and mid-sized businesses. Read more <u>here</u>.





What you are actually doing here is to bribe nokia to put these jobs into Canada by paying hundreds of thousands of dollars per job from taxpayer money. What this does is to lower the cost basis of nokia per employee. This has been going on for decades, called FDI which all civil servants think is a good thing. I spent a lot of time explaining to civil servants in ottawa that its not good for our economy that American and Oversees branch offices can employ Canadians at half the cost to all the canadian companies around them due to these subsidies. We should not do them at all, they are toxic, at least in the tech sector.

X (formerly Twitter): Tobi Lutke, CEO of Shopify, explains the impact of Nokia and the drawbacks of foreign direct investment. Read more <u>here</u>.

SHIELD Score

The federal government's \$40 million contribution to Nokia's R&D campus in Ottawa receives a 6/10 on the SHIELD Sovereignty Score.

1. Sovereignty: This section measures if and how the policy choice increases Canada's sovereignty and strategic autonomy.

Does it use or incentivize the development of Canadian innovation?

• No - The innovations created at this facility will be generated in Canada but will be owned by Nokia and the technology will be commercialized for use around the world under the Nokia banner. Canada's 5G/6G and quantum computing R&D ecosystem will be strengthened with the new campus. The campus will house Canadian inventors and innovators. It will welcome international talent. All of these folks will bring their expertise, creativity and ideas to the system. But the outputs will be owned by Nokia with little value add delivered to the governments or scientists that supported its development. In 2022, when this contribution was first announced, the CEO of Nokia Canada made a statement about net-new Canadian IP but we have not seen any other references to this point and it is not clear what was meant by the comment.²⁰ This is a missed opportunity for Canada and one that could be rectified if the country had strong IP retention requirements.

Does it enhance national economic security and defence and/or promote interoperability or open standards

<u>Yes</u> - At the time the decision was made the government was focused on reducing reliance on Huawei's 5G technology. That means that in 2022, the decision to provide this money to Nokia would certainly have been seen as enhancing security. While the picture is guite



different today, we believe that national economic security is enhanced at this time as well. Today, there is an overdependence on US firms in the network infrastructure space. This contribution diversifies the industry.

Does it reduce dependency on foreign firms or supply chains?

<u>Yes</u> - Government reduced reliance on China, a country that has made multiple efforts to undermine Canadian sovereignty and shifted to a Finnish firm - a Canadian ally. The government will need to continuously monitor this dynamic to ensure that no new dynamics emerge that may undermine Canadian sovereignty. It's clear that Canadian universities form an important piece of Nokia's supply chain - providing the researchers and partners that help build Nokia's technology. We should be proud of this fact. Our locally trained researchers and scientists are in demand and build high-caliber, next-generation technologies to <u>power</u> "breakthroughs in AI connectivity, data-centre connectivity and quantum safe infrastructure." ²¹ The Nokia campus will keep more Canadian-trained talent working on solving Canadian problems while also attracting international talent to the ecosystem.

Does it avoid entrenching monopolies and/or systems that concentrate power in private hands?

• <u>No</u> - While it was better for this investment to go to Nokia than to an American company with a more dominant position in the market, or to lose the campus entirely, the fact remains that Nokia is a dominant player in this industry with significant market share. Nokia is the <u>largest employer in Ottawa's technology cluster</u> and the company has <u>partnered with NVIDIA</u> to provide the compute power needed for the project.^{22,23} This was noted as a factor that will attract global talent to Ottawa's tech clusters as a part of Nokia's press release.²⁴

Does it increase the ability for Canada to govern technology; for example, through IP ownership and data control by Canadian companies or the government itself?

<u>Yes</u> - Through this partnership, Canada has given itself the ability to design unique solutions to Canada's challenges instead of purchasing off the shelf options offered by other companies in this industry. The campus is located in Canada and operated by a Finnish company, raising less concern about how laws and trade deals might shape how foreign governments can access our data through the company's infrastructure, as compared to US companies.

2. Economic Transformation: This section measures if and how the policy delivers value-add to people in Canada, short-term and long-term.

Is the intellectual property, data and profit generated by this decision retained by Canadian firms?

<u>No</u> - The contribution was provided with no strings attached. That means that ownership
of the IP and accompanying profit when it is licensed will be delivered directly to Nokia's
income statement without a corresponding benefit to partnering universities or to the
government itself. The campus upgrade is part of a larger plan for Nokia to work with
the Government of Canada and universities on AI- and machine-learning-enhanced



research in telecommunications infrastructure, specifically 5G, and will include developing long-term upgrades spanning defence and national security, communications, and other key areas.²⁵ Some of these projects may yield IP that is retained by the government but there is no guarantee of this and there is no provision for this in the agreement. Building and upgrading infrastructure are worthy goals but the score would have been enhanced if there had been explicit considerations given to ensuring some of the intangible value add was delivered to Canadian partners.

Does it create, sustain or improve jobs in Canada?

<u>Yes</u> - Nokia employs more than <u>1,900</u> people at the Ottawa campus.²⁶ The expansion will increase that number by <u>340 jobs</u> and add up to <u>400 interns or co-op students</u>.^{27,28} Following through on this commitment will make Nokia a good labour market citizen working to provide training and job experience opportunities for young people who are currently facing an unemployment crisis.²⁹

Does it increase skill utilization or broaden the skill base of Canadian workers?

<u>Yes</u> - The campus will create new R&D jobs at the Ottawa tech cluster's largest employer, elevating the utilization of scientists' skills and employing them to solve uniquely Canadian problems, particularly in emerging sectors such as <u>Quantum</u>, <u>6G and Al.</u>³⁰ We also see the potential for extensive human capital formation and broadening the skills base of young professionals through 400 intern and co-op opportunities.

Does it promote systems that share economic benefits broadly?

<u>No</u> - Under the terms of the <u>Strategic Innovation Fund</u>, the <u>original funder</u> of this project, government contributions can be provided in multiple forms including repayable and non-repayable loans.^{31, 32} The Strategic Response Fund, the new funder of the project, <u>lists</u> several types of projects that are eligible for non-repayable contributions including "projects that promote innovation with research, development and technology adoption or adaptation from all sectors of the economy."³³ The Government of Canada <u>press release</u> issued on November 25th describes the cash provision only as a contribution³⁴. There will be some positive <u>spillovers</u> that are generated in the broader ecosystem that should be mentioned but are not enough to move the assessment from a no to a yes.³⁵ In addition, the campus will include <u>1,900 new residential units</u>, increasing the housing supply, but again, this contribution is not enough to move from a no to yes.³⁶

Does it enhance affordability, quality, and innovation for consumers, not just returns for incumbents?

<u>Yes</u> - The <u>expected returns</u> to Canadian consumers will be through advancements and use of Nokia's 5G networks.³⁷ Those networks will be used by Canada's telecommunications companies, namely <u>Bell, Telus and Rogers</u>, to deliver higher quality service to their customers.³⁸ The use of Nokia's 5G network instead of other multinational companies means that user data is more secure than it otherwise would have been, though there is work to do to strengthen data sovereignty and security through international trade law and both national and provincial privacy legislation. The next step will be to stop allowing Canada's telcos to operate as an oligopoly, but that is a different SHIELD score entirely.



Notes

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About SHIELD

SHIELD is a next-generation policy studio focused on developing Canada's sovereignty and driving economic transformation. We work across infrastructures, industry, and innovation to confront systemic risks, retain economic value, and build the domestic capacity Canada needs to thrive. Our goal is a more prosperous, resilient, and independent future for all Canadians.

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