



Google's Economic Impact in Canada 2022

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Google's Economic Impact in Canada - 2022

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Public First is a global strategic consultancy that works to help organizations better understand public opinion, analyse economic trends and craft new policy proposals.

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Introduction

When you need answers, directions, instructions or inspiration, Google's products are on hand to get you the reliable and timely information you need.

On average, Canadians told us they used Google Search **4 times a day** to research something for their personal life. In other words, Google answers over **5 million** questions for Canadians every hour – helping them to be more productive in both their personal and professional lives.

Translating this into economic terms, we estimate that Google Search, Google Play, YouTube, Google Cloud and Google advertising tools delivered **\$45 billion** of economic activity for Canadian businesses, nonprofits, publishers, creators, and developers in 2022.

And of course, Google's core platforms have long been powered by artificial intelligence (AI). This technology offers radical potential for exponential growth, and Google is working to help Canada fully realize AI's economic potential. If Canada gets this right, generative AI could increase the economy of Canada by **\$210 billion**, the equivalent of 8% of Gross Value Added (GVA).¹

¹ Following the methodology of Goldman Sachs, we assumed no productivity improvements to types of tasks other than those identified by them. In addition, we assume capital intensity remains constant.

To better understand how Google products support Canada and Canadians, Google has commissioned independent consultancy Public First to explore:



Google's commitments to Canada, across its workforce and through community support.



The massive potential of AI going forward, specifically looking at the economic impact, understanding Canadians' sentiment around the innovation, and productivity benefits for the workforce.



Google's impact on Canadian businesses and the economy, helping enable new business models and connecting businesses with customers across the world.



Google's support for individual Canadians and families, helping them be more productive, keep learning, find jobs, and reduce their environmental impact.

Key Findings

1

In 2022, Google Search, Google Play, YouTube, Google Cloud and Google Advertising tools helped provide **\$45 billion** of economic activity for Canadian businesses, nonprofits, publishers, creators and developers.



\$5.2bn

2

In total, we estimate that Google Search and Ads are supporting **\$5.2 billion** in exports for the Canadian economy.



3

Every month in 2022, Google helped drive over **298 million direct connections**, including phone calls, requests for directions, messages, bookings, and reviews for Canadian businesses.

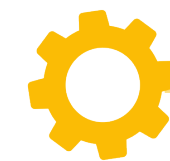


4

In 2022, Google.org contributed **\$5.53 million** to Canadian non-profits looking to expand inclusive economic opportunity, contribute to furthering digital literacy and help tackle cultural and sustainability issues at scale, through funding of organizations such as ComIT, MediaSmarts, Indigenous Screen Office, Actua, and Oceans North.



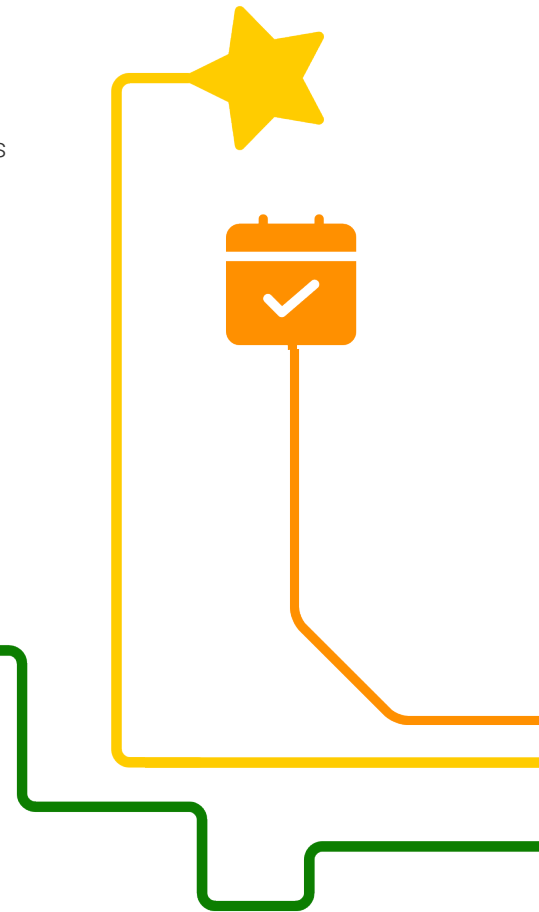
\$5.53m

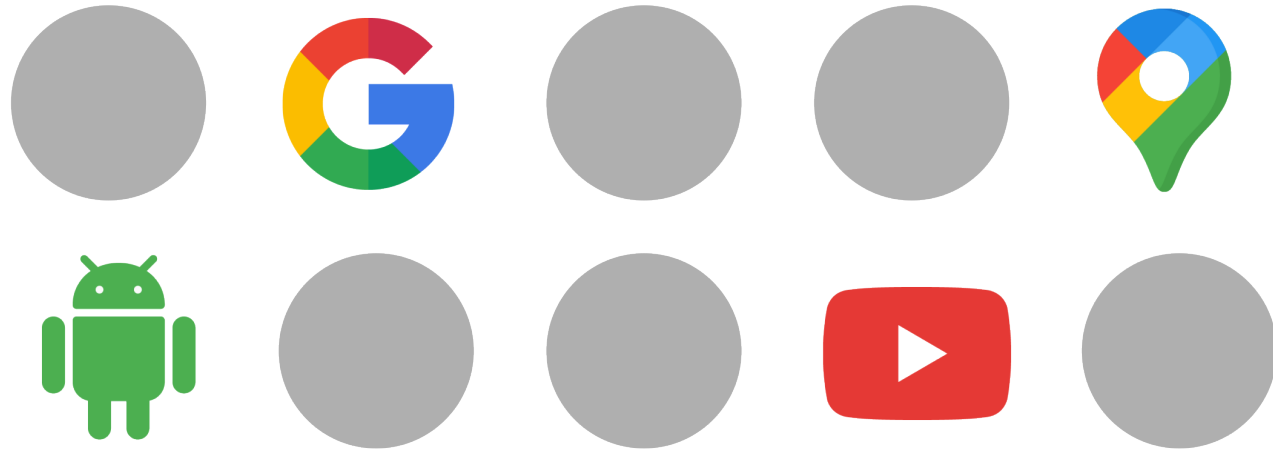


\$210 billion

5

Generative AI could increase the economy of Canada by **\$210 billion**, the equivalent of **8% of Gross Value Added (GVA)**





6

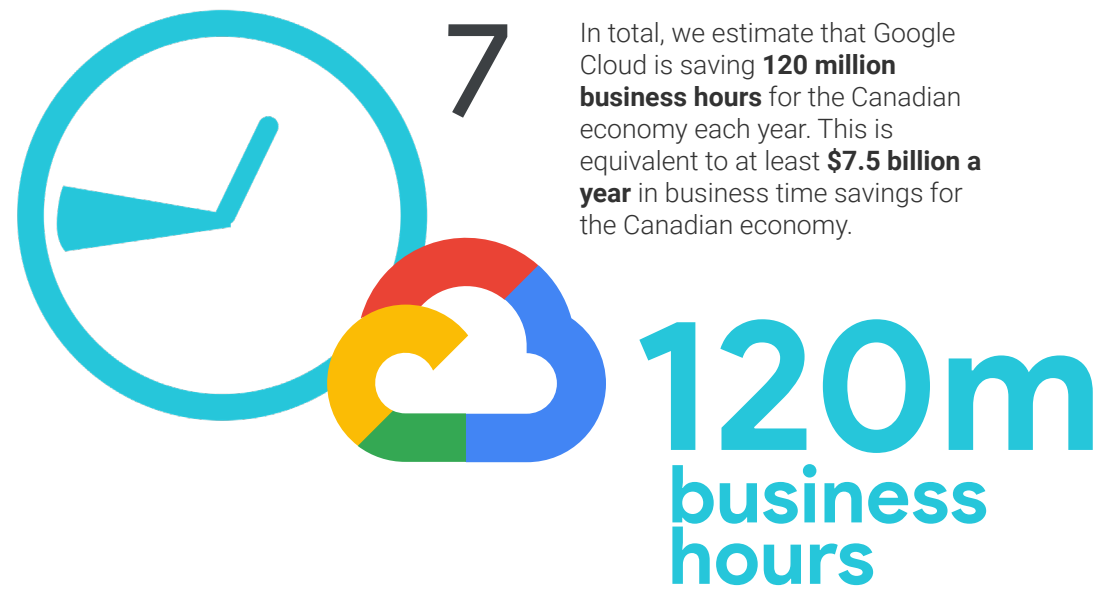
Canadians identified Google Search, Google Maps, YouTube and Android as being among the ten most helpful innovations of the last thirty years.



9

Over **19,000** people in Canada have graduated from the Google Career Certificate program, with **75%** of certificate graduates reporting a positive career outcome, like a new job, promotion or raise, within six months of completion.

19,000



8

By moving computing workloads from on-premise to Google Cloud, we estimate that businesses have prevented over **9,500 tonnes of CO2 emissions**. This is approximately equivalent to flying from Halifax to Vancouver 15,000 times.

9,500
tonnes CO₂



10

Based on time saved, we estimate that in a given year, Google services could be producing a **\$58 billion** improvement in productivity for the Canadian economy.

↑ \$58bn

How we quantified Google's impact in Canada

In this paper, we sought to use a range of different methods to quantify the economic impact and helpfulness of Google Search, YouTube, Android and other Google products:

- Building on the precedent of previous Google impact reports from markets including Canada, the United States, and the United Kingdom, we used traditional economic modeling built upon third-party estimates of Google Canada's market size, and standard returns on investment (ROI) to measure the economic activity driven by Google's core products.
- Working with independent providers Dynata, MSI and Maru Blue we conducted extensive polling of a representative sample of over 7,000 individuals representing every province and territory in Canada.
- At the same time, we polled 2,000 senior business leaders from small, medium and large businesses, representing a range of different industries.
- For YouTube, we incorporated Oxford Economics' estimate of YouTube's total economic impact in Canada in 2022.

To learn more about our modeling approach, please see the Methodology section in the report's appendix.

Public First is a member of the Market Research Society. The full tables for all the data used in this report is available to download from our website [here](#) and [here](#). While Google commissioned this report from Public First, all information in this report is derived or estimated by Public First analysis using non-Google proprietary and publicly available information. Google has not supplied any additional data, nor does it endorse any estimates made in the report. Where information has been obtained from third party sources and proprietary research, this is clearly referenced in the footnotes. All numbers are Public First's best estimates as of September 2023.

Google's commitments to Canada

Google has called this country home since 2001 and is proud of its presence in Canada. With Google Canada offices in Waterloo, Toronto, and Montreal, there are teams working across Engineering, AI Research, Sales, Marketing, and more.

For over two decades, Google Canada has been supporting national and local community organizations from coast to coast in a variety of ways. In 2022, **Google.org** contributed **\$5.53 million** to Canadian non-profits looking to expand inclusive economic opportunity, contribute to furthering digital literacy and help tackle cultural and sustainability issues at scale, through funding of organizations such as **ComIT, MediaSmarts, Indigenous Screen Office, Actua, and Oceans North**.

In addition, Google for Nonprofits provides in-kind product contributions to Canadian charities, powering them with access to digital tools that are integral to running day-to-day operations. In 2022, Google for Nonprofits provided over **15,000** Canadian nonprofits with Google Workspace for Nonprofits access, valued at more than **\$10 million**. This contribution allows nonprofits to use Gmail, Google Drive, Google Meet and more, at no charge. Additionally, through Google Ad Grants, eligible nonprofits can access up to \$10,000 USD of donated Google Search advertising every month. Nonprofits use this to attract donors, raise awareness for their organization, recruit volunteers, and more. In 2022, the Google Ad Grants program provided more than **\$120 million** in donated advertising to nonprofits across Canada.

Google's Impact per Province and Territories

\$500m

The Territories

\$5.6bn

British Columbia

\$7.3bn

Alberta

\$1.6bn

Saskatchewan

\$1.7bn

Manitoba

\$9bn

Québec

\$900m

Newfoundland and Labrador

\$200m

Prince Edward Island

\$1.1bn

Nova Scotia

\$1.1bn

New Brunswick

\$16bn

Ontario



Exploring the Potential of AI

New and developing digital technologies such as AI have the potential to unlock significant opportunities across Canada, helping tackle some of our largest economic and societal challenges.

AI already underpins many of Google's leading products, including Search, Maps and Cloud. Google's Transformer paper in 2017 created the neural network architecture that's the foundation for most of the generative AI and large language models today. In the next few years, the economic impact of AI is likely to grow even further, as generative AI is increasingly integrated into workflows.

New algorithms, advances in computing power and the immense amount of data available across the web means that AI is already a significant driver of economic value in Canada. And this is just the beginning.



Generative AI could increase the economy of Canada by **\$210 billion**, the equivalent of 8% of Gross Value Added (GVA)¹



Generative AI alone could save the average Canadian worker over **100 hours a year**, which would be the single biggest improvement to worker productivity since the arrival of Google Search.



One in three (34%) of employers plan to invest in AI based technology within the next five years. Of those, **61%** said that they are likely to reallocate existing workers' time to other more valuable tasks.

The social applications of AI are profound and continue to evolve rapidly. While Canadian individuals and businesses are broadly optimistic about the future use cases for this technology and the opportunities that it presents, there is an imperative to develop bold and responsible AI that makes the world a better place. Learn more about Google's bold and responsible AI principles [here](#).

¹ Following the methodology of Goldman Sachs, we assumed no productivity improvements to types of tasks other than those identified by them. In addition, we assume capital intensity remains constant.

AI for Social Good

Next generation city planning with Environmental Insights Explorer

With the effects of climate change top of mind, cities across Canada are leaning on AI-powered solutions to plan for the future. Montreal and Trois-Rivieres are making strides in reducing emissions with help from Google's Environmental Insights Explorer. By integrating the tool into planning processes, Montreal is using the data for reporting and progress indicators on its Smart City Challenge of reducing car trips, while Trois-Rivieres is monitoring trends to meet its 2050 carbon impact-related goals.

Assisting physicians in making faster and more accurate diagnosis with Med-PaLM2

Better patient care is at the heart of Google's Med-PaLM, a healthcare-focused large language model. It provides health professionals with high-quality, long-form answers to their patient's medical questions, and it even passed the US Medical License Exam (USMLE) at an expert doctor level. Toronto-based Senior Research Scientist Shek Azizi and her team have enhanced Med-PaLM to go beyond just language to understand information from medical images like chest x-rays and mammograms, and it is now being evaluated by clinicians and non-clinicians to make sure it can work in real-world settings.

Making speech recognition more accessible, one voice at a time

Project Understood, a collaboration between Google and the Canadian Down Syndrome Society, wants to make voice recognition software more accessible for everyone. Because of the low amount of relevant training data available, current voice recognition technology often struggles to understand unique speech patterns. Project Understood asks for voice samples from the Down syndrome community so Google can effectively train its speech recognition software and make technology more inclusive to help them ask smart speakers to turn on the lights or check the weather.

Supporting Canadians and local authorities during wildfires

Google has worked with partner organizations and local authorities to help detect wildfires across Canada. By using essential data, such as imagery and infrared information from satellites, this program creates wildfire boundary maps in near-real time. Google provides early notifications in some places by detecting ignitions, allowing them to notify fire agencies and provide SOS Alerts in Search. In 2022, Google covered over 30 big wildfire events in Canada and the U.S., with more than 7 million views in Search and Maps helping to inform people and firefighting teams.

Google's Impact on Business & the Economy

Google's products are helping drive the competitiveness of Canadian companies: supporting business growth, enabling businesses of all sizes to reach customers across the world, providing new platforms for independent creators to earn a living through, and increasing productivity for workers.



Based on time saved, we estimate that in a given year, Google services could be producing a **\$58 billion** improvement in productivity for the Canadian economy.



In total, we estimate that these tools could save the average worker in Canada over **92 hours** a year.

Connecting Customers & Businesses Online Through Advertising

Google's AI powered advertising tools help Canadian companies find new customers, unlock additional opportunities, and accelerate business growth. On average, Google estimates that for every \$1 a business spends on Google Ads, it receives \$8 back in profit through Google Search and Ads.²

\$38.9bn

In 2022, we estimate that Google's Search and Ads alone helped provide **\$38.9 billion** in economic activity for businesses in Canada.

\$5.2bn

In total, we estimate that Google Search and Ads are supporting **\$5.2 billion** in exports for the Canadian economy.

20%

Small businesses estimate Search is responsible for around **20%** of their new customers

37%

37% of companies agreed that Search or Ads is essential to the successful operations of their business.

Using Online Tools to Support Business Growth

Google's online tools are utilized by businesses across Canada. From emerging start-ups through to established corporations, businesses can connect with customers at home and overseas, and benefit from improved productivity across the workplace.



Every month in 2022, Google helped drive over **298 million** direct connections, including phone calls, requests for directions, messages, bookings and reviews for Canadian businesses.



In 2022, more than **2.1 million** Canadian businesses and sole traders received phone calls, requests for directions, messages, bookings, reviews and other direct connections to their customers from Google.



For many businesses, Google's tools and services are a part of their every day operations. **87%** said Search is a useful or even critical tool and **75%** said the same about Gmail.



Businesses using Google Workspace were **26%** more likely to report revenue growth of over 5% a year.



68% of businesses said online search was an important way that customers found their business.



72% of Google Maps users said they found Google Maps helpful when looking for a new business to try.



64% of small businesses agreed that online search engines made it easier for local customers or clients to find their business.

How L'Oréal Canada uses AI-powered advertising tools to boost revenue and its return on advertising spend

L'Oréal Canada is committed to innovation and challenging the status quo, which includes future-proofing its operations by adopting advanced technologies. The company, which is the top beauty group in sales globally, is using AI-enabled tools to streamline advertising campaigns, saving time and resources for more strategic work.

Partnering with their agency Labelium, L'Oréal's Montréal-based team has been using Performance Max, an AI-powered solution that allows performance advertisers to access all of their Google Ads inventory from a single campaign, across its brands. The company used its Kiehl's brand to pilot its capacity to segment products and focus on optimizing its portfolio.

Performance Max uses machine learning algorithms that intelligently reallocate marketing budgets and fine-tune to focus on audience segments that have proven results. This automated approach allows companies to optimize their marketing spend more effectively and can help to increase productivity.

Canada was one of the first markets L'Oréal tested Google's Performance Max in and the results were significant. The cosmetics company saw a 78% increase in return on ad spend and a 49% increase in revenue on its Kiehl's brand from leveraging the AI-powered tool.

Following the success of Kiehl's, L'Oréal Canada has started scaling Performance Max to all of its e-commerce enabled brands such as Lancôme, Kérastase and Skin Ceuticals. Once again, the results from the AI tool were impressive with a 44% increase in revenue and a 29% increase in return on ad spend across its brands. Following the positive results in Canada, L'Oréal is expanding Performance Max in other markets as well.

By harnessing AI to automate its advertising at scale, L'Oréal Canada can achieve media efficiency, time productivity and a performance gain that allows it to focus efforts on the personalization roadmap.

"The Performance Max product has enabled us to achieve media efficiency, time productivity and a gain in performance that contribute to our project goal of personalization of our e-commerce media & audience's customer journey."

Sarah-Anne Ducreux

**Chief Digital Officer, L'Oréal Canada
Consumer Product Division**



The Potential of Cloud Computing

Businesses are managing more data than ever before, and therefore require a safe and reliable way of storing this data. Cloud computing services - such as those offered by Google Cloud - offer organizations enhanced agility, cost savings and access to cutting-edge technologies in today's fast-paced business landscape. Users can easily scale their computing resources up or down as their needs change, while also benefiting from improved data privacy practices and stronger cybersecurity protections.



Google Cloud boosts the productivity of Canadian SMBs by **5%**, supporting **\$10.3 billion** of economic activity across the country.



The Google Cloud ecosystem in total generated **\$610 million** in economic activity in Canada.



In total, we estimate that Google Cloud is saving **120 million** business hours for the Canadian economy each year. This is equivalent to at least **\$7.5 billion** a year in business time savings for the Canadian economy.



Google Cloud customers told us that the most significant benefits they experienced were: **69%** said storing larger amounts of data, **43%** said lower costs, **27%** improved carbon footprint, **23%** enhancing security of their IT infrastructure.



We estimate that Canadian businesses have saved **\$290 million** in costs and efficiency by transitioning from more costly on-premises servers to the Google Cloud.



By moving computing workloads from on-premises to Google Cloud, we estimate that businesses have prevented over **9,500 tonnes of CO2 emissions**.³ This is approximately equivalent to flying from Halifax to Vancouver 15,000 times.

How Geotab is making big strides in transforming transportation with Google Cloud

With over 47,000 customers across 150 countries, Oakville-based Geotab uses Google Cloud to enable its customers to make better decisions, increase productivity, have safer fleets and achieve sustainability goals. The company captures data from more than 3.8 million vehicles and provides organizations with data-driven insights to transform their fleet and operations.

Gaining data intelligence from large amounts of data is crucial for Geotab, so it needed a system that's quick, dependable, secure, and can scale. That's why the company moved its server infrastructure to Google Cloud to help meet its goals.

At the heart of Geotab's platform is Google BigQuery, part of the Cloud ecosystem, where more than three-billion raw data records are inputted everyday. It takes only five-to-ten seconds from the time data is collected from one of the company's sensors until it's available for analysis, a process that would have previously taken months. Speed is essential for customers who rely on the second-to-second nature of the data.

In addition to providing insights, Geotab uses its analytics to help the transportation industry innovate and move in a more sustainable direction. In one case, Geotab supported a client's fleet of 91,000 vehicles to evaluate the electrification of its fleet. Geotab found that 13% of vehicles could be switched to EVs, saving the client \$33-million and reducing carbon emissions by 194,000 tons over four years — similar to taking over 42,000 cars off the road.

The company also makes data privacy a priority by using AI-driven identification to anonymize customer data, removing personal trips and residential locations. So while data is used for analytics, individual privacy is a critical priority.

With a reduced time to insight on vehicle performance, efficiency and productivity, Geotab, a global leader in connected transportation solutions, is making big strides in transforming commercial fleet transportation.

Neil Cawse
Founder and CEO, Geotab



Facilitating the Android Developer ecosystem



In 2022, we estimate the Android App Economy generated over **\$3 billion** in revenue for Canadian developers



while the Android developer ecosystem supported over **250,000** jobs across Canada

Supporting the YouTube Creator Ecosystem from Coast to Coast⁴



YouTube's creative ecosystem contributed more than **\$2 billion** to Canadian GDP in 2022.



YouTube's creative ecosystem supported more than **35,000** full time equivalent jobs in 2022.



Over **90%** of watch time on content produced by channels in Canada comes from outside of Canada.

Further Opportunities for Digital Transformation

Every day we're seeing small businesses across Canada embrace the web, and there is still more opportunity to take advantage of these new technologies. However, in our polling, we found that:

35%

Only 35% of small and medium businesses were advertising online.

49%

Only 49% of small and medium businesses were using cloud computing.

18%

Only 18% of small and medium businesses were using AI or machine learning.

If the adoption of core digital technologies could be boosted among small and medium businesses to match the levels seen in other advanced economies, we estimate that it could increase the total Canadian economy by over **\$77 billion**.

Powering Canadians with workforce training and learning in the classroom

With the continual introduction of new technologies, it is more important than ever that Canadians young and old can learn new skills and keep pace with the world around them. Workplaces and, consequently, educational institutions, are rapidly evolving in order to meet the demands of the modern economy.



We estimate assistive technologies could help over **358,496** unemployed or economically inactive people with disabilities in Canada access work, potentially boosting the economy by over **\$45 billion** per year.



Over **19,000** people in Canada have graduated from the Google Certificates program, with over **75%** of certificate graduates reporting a positive career outcome, like a new job, promotion or raise, within six months of completion.⁵



To date, **79** Canadian companies have participated in North American Google for Startups Accelerator cohorts.⁶

79%

79% of Canadians say Google Search is important to them while at work.

75%

75% of Canadian parents said that Google Classroom helped their child's learning.

81%

81% of Canadians parents who have used Google Classroom say it is convenient.

⁵ Per Google internal data and program graduates survey, Canada 2022
⁶ Source: Google Internal Data, 2022



Google Supporting Families & Individuals

Many traditional economic measures, like GDP, do not capture the value created for individual Canadian consumers and families. Google's products help Canadians save time, stay connected and learn new things.

The power of Search

On average, Canadians told us they used Google Search **4 times a day** to research something for their personal life. That is the equivalent of over **5 million** questions answered every hour.

Making everyday lives easier

Canadians identified Google Search, Google Maps, YouTube and Android as being among the ten most helpful innovations of the last thirty years.

Connecting families

One in three (32%) of Canadians have used Google products to share photos, memories, messages with friends and families they don't often see in person.

Supporting healthier and more sustainable choices



Google Maps' fuel-efficient routing option leverages Google's AI tools and insights from the U.S. Department of Energy's National Renewable Energy Laboratory and data from the European Environment Agency to optimize fuel-efficient route choices. Fuel-efficient routing is available in the UK, the U.S., Canada, Europe and Egypt. It is already estimated to have helped avoid more than 1.2 million metric tons of CO₂e globally through the end of 2022 –the equivalent of taking approximately 250,000 fuel-based cars off the road.⁷

We estimate that Fitbit has helped Canadians walk **1,600 billion** steps in 2022. This is equivalent to walking 29,000 laps of the equator.

⁷ Google uses a high-quality ML prediction model based on a validated simulator from the National Renewable Energy Laboratory (NREL) to estimate the expected fuel or energy consumption for each route option when users request driving directions. First, Google identifies the route that consumes the least amount of fuel or energy. If this route is not already the fastest one and it offers meaningful energy and fuel savings with only a small increase in driving time, they then recommend it to the user. Google tracks all trips where users choose the fuel-efficient route instead of the fastest route or select it even when not the default option. To calculate avoided emissions, Google tallied the fuel usage from the chosen fuel-efficient routes and subtract it from the fuel consumption that would have occurred on the fastest route without eco-friendly routing and apply adjustments for the following factors: CO₂e factors, fleet factors, well-to-wheels factors, and powertrain mismatch factors. Google then input the estimated avoided emissions into the EPA's Greenhouse Gas Equivalencies Calculator to calculate equivalent cars off the road for a year. For details about Google's initial calculation methodology, see their 2021 white paper, Google Maps Eco-Friendly Routing.

Top 10 Most Helpful Innovations of the Last Thirty Years



1. Wifi



2. Google Search



3. Google Maps



4. Internet Browser



5. World Wide Web



6. iPhone



7. YouTube



8. Bluetooth



9. Android



10. Facebook



Appendix - Methodology

Economic Impact

Google Ads

Following the precedent of past Google impact reports, we use third-party data to estimate the total size of the Canadian Google Ads market, combining PWC data on the total paid search market with Statcounter estimates of Google's market share and Statista estimates of average costs per click (CPC) and click through rates (CTR).

Following the methodology of the US [Google Economic Impact Report](#), we then scale this revenue by an assumed Return on Investment (ROI) factor of 8, from:

- [Varian \(2009\)](#) estimates that businesses make on average \$2 for every \$1 they spend of AdWords.
- [Jansen and Spink \(2009\)](#) estimate that businesses receive 5 clicks on their search results for every 1 click on their ads.
- Google estimates that search clicks are about 70% as valuable as ad clicks.
- Total ROI is then $2 * \text{spend} + 70\% * 5 * 2 * \text{spend} - \text{spend} = 8 (\text{spend})$.

More information on this methodology is available at <https://economicimpact.google.com/methodology/>

AdSense

In order to estimate total Canada AdSense revenues, we combined:

- Google's published 2022 Network Revenue
- an assumption on Traffic Acquisition Costs as a % of Network Revenue, based on past published TAC data.
- Canada's share of non-video display spending and growth in overall market since 2022, derived from PWC data.

Cloud

In order to estimate the total productivity impact of Google Cloud in Canada we combine:

- Statista data on total public cloud revenue in Canada in 2023
- An assumption that every dollar invested in Cloud services by users generates a net return

Android

We draw on:

- Statista data on app revenue in Canada
- Statcounter data on Android market share
- [PPI data](#) on the number of jobs supported in Canada by Android

This allowed us to estimate Google Play revenues for developers in Canada.

Potential Economic Impact of Generative AI

In order to do this, we:

- Drew on the US O*Net occupation database, which contains information on 51 different types of work activity for around ~800 types of occupation
- Based upon Goldman Sachs' [identification](#) of the types of tasks exposed to automation by generative AI, we classified the proportions of tasks in each occupation that were susceptible to automation.
- We aggregating this into broader economic categories based on their overall share of US employment and average wage bill, and then created our own crosswalk to convert the results from each occupation to the corresponding occupation in the Canadian National Occupation Classification
- Aggregate by wage bill and occupation to produce an estimate of the total possible improvement in labour productivity.
- Assumed capital intensity remained constant, and converted this labour productivity improvement into an overall improvement in GVA.

Consumer

Cost Savings from Google Maps and Search

The cost savings for Google Maps were based on estimated travel time savings estimated using our consumer survey data on Google Maps usage in Canada.

Steps walked with help from Fitbit

We use an estimate on the number of steps walked by Canadians each day alongside estimates by the University of Sydney and Brigham Young University on the extra steps walked as a result of fitness trackers to estimate extra steps walked per person, this is then combined and our own polling on Fitbit use in Canada to estimate the total extra steps walked by Canadians each year as a result of Fitbit.

Assistive technology

We used data from Statistics Canada on those with a physical disability to estimate the number of people assistive technology could help access work. This was combined with data on output per person to estimate the potential impact on the economy.

Business

Exports supported by Google Search and Ads

We polled Canadian businesses to estimate the proportion of goods exported and combined this with our previously calculated Google Ads impact number.

Workplace time savings and productivity gains

Using the [approach of Hal Varian](#), and estimates of Google Search usage from our survey, we quantified the aggregate working time saved from Google Search being used to answer questions.

We also used data from our survey on Google Workspace usage, and [Forrester estimates](#) of productivity gains, to estimate the impact of greater collaboration and efficiency through Google Workspace.

Cloud

Business time savings

We used data from our survey to calculate the proportion of businesses that actively use Google Cloud alongside the time saved from using cloud computing as outlined in [IDC's paper](#). This was combined with Statistics Canada data on the number of people employed to estimate total time saved. The economic gain was calculated by considering this alongside the gross value added per worker.

Boost to productivity of SMBs

The average productivity gain for businesses using the cloud was calculated using data from a [report by LSE](#). We then estimated the value added by Canadian SMBs and used data from our survey on the proportion of businesses that actively use Google Cloud to calculate the overall boost to productivity.

Savings from moving from on-premises to cloud

We used our survey data on the savings from cloud and share of businesses using Google Cloud alongside our calculated economic impact of Google Cloud to calculate the savings gained from moving to cloud.

CO2 savings from Google Cloud

We used estimates by Go Climate on emissions from on-premise servers and cloud servers as well as data from Statista on renewable energy in Canada to calculate the difference in emission between on-premise and cloud. This was combined with survey data on Google Cloud use to calculate the total emissions avoided.

The flight equivalency is based on the carbon emissions for an individual to travel the journey and is calculated using industry estimates of the kg CO2 per passenger per hour alongside journey flight time.



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