(D) NANOS Time Map

A world-class spatial forecaster that visualizes election data and sentiment modelling

National Platform User Manual

About our political modelling and mapping services

NANOS Time Map Data Modelling | Mapping Solutions

We deliver world-class data modelling and mapping solutions.

Our most recent service offering is the **Nanos Time Map**, a spatial forecaster that visualizes election data and sentiment modelling of 73,000 federal polling stations every month.

The Nanos Political Time Map includes the integration of national federal election data, Nanos political sentiment modelling and interactive maps.

Subscribe for a constituency or national riding map.

Make data driven decisions.

NANOS Time Map Election Data | New Service Platform

The Nanos Political Time Map is an interactive spatial forecasting service platform.

Make more efficient use of campaign resources.

⊙ Know Who's Winning & Where **⊙**

 \odot Identify Where to Raise Financial Support \odot

○ Monitor Trends for Strategic Insight & Response ○

⊙ Target Electoral Battlegrounds & Where to Canvass ⊙

 \odot Locate Your Base Support & Where to Get Out Your Vote \odot

Transforming the effectiveness of local, regional and national political campaign planning and execution.

NANOS Time Map Election Data | New Service Platform

Table of Contents

Nanos Time Map Background & Modelling	<u>Slide 5 – 10</u>
Using the Nanos Time Map Platform	Slide 11 – 13
Mining the 2015 Election Results	Slide 14
Target Resources using Nanos Model Data	Slide 15
Pinpoint Too Close to Call Battlegrounds	- Slide 16 – 18
Locate Your Base Voter Support	Slide 19 – 20
Identify Opportunities for Fundraising	- Slide 21 – 23
Monitoring Trends for Strategic Insight	- Slide 24 – 25
Visualization Tools & Analytics	- Slide 26 – 32
Plan Your Campaign for Maximum Impact	Slide 33
Subscription Options & Set-up	- Slide 34 – 36
Limitations on Use & Modelling	-Slide 37
Nanos Research – Background & Contact	- Slide 38 – 43

NANOS Time Map Election Data | Intelligent Modelling

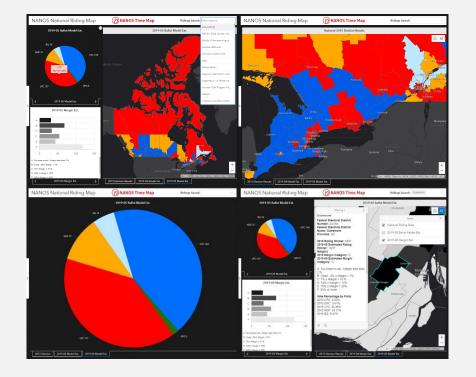
2015 Election Data

- Historical tracking from the last federal election or most recent by-election for every riding and polling station in Canada.
- Details on party and candidate support for the major federal political parties.
- Categorization of margins of victory at the riding and polling station level
- Mapping of postal codes which have made political contributions to registered federal parties including the amount of the donation

2019 Intelligent Modelling

- Data modelling using the latest Nanos tracking to estimate party support to the neighbourhood level
- Estimates on **accessible voters** for each of the main federal parties at the riding level
- Identification of ridings and polling stations which are too close to call or which could switch from one political party to another
- Comparison of 2015 election data with the latest Nanos political modelling.
- Nanos **modelling data updates every month** so that as the political situation changes you have the intelligence at your fingertips.
- Map out the distribution of political preferences and shifts over time by polling station to gauge the effectiveness of your neighbourhood outreach.

Using the Nanos Time Map National Platform



Nanos Time Map National Platform

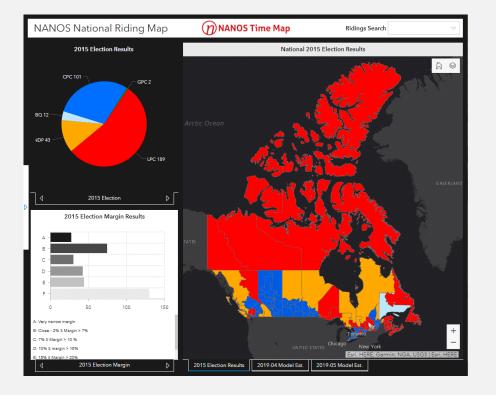
National Platform Functions

- The Nanos Political Time Map offers a variety of functions and resources
- **<u>2015 Election</u>**: understand the results
- <u>2019 Model Estimates</u>: monitor unfolding trends for strategic insights
- **Ballot Winners**: identify whose winning and ridings vulnerable to voter swings
- **<u>Battlegrounds</u>**: identify ridings and regions that are too close to call
- <u>Reports & Analytics</u>: generate analytic reports for 2015 results & 2019 national ballot & margin model estimates

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 <u>Campaign Strategy</u>: more efficient national & riding level campaign strategic planning

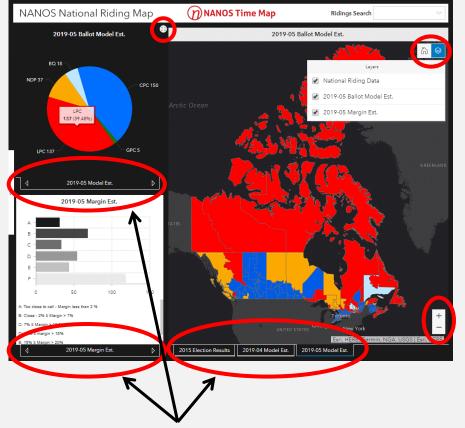
Navigate the Nanos Time Map National Platform



National Platform Navigation

- The National Platform provides access to riding level data for all federal ridings
- Data includes 2015 results & 2019 compiled monthly Nanos model estimates for trend monitoring
- The platform application allows clients to easily locate & zoom in to specific ridings
- The National Platform offers both visual and numeric data reports for trend monitoring and analysis
- National Platform data layers include 2015 Election results, and 2019 Nanos ballot & margin model estimates

How to Navigate the Time Map National Platform



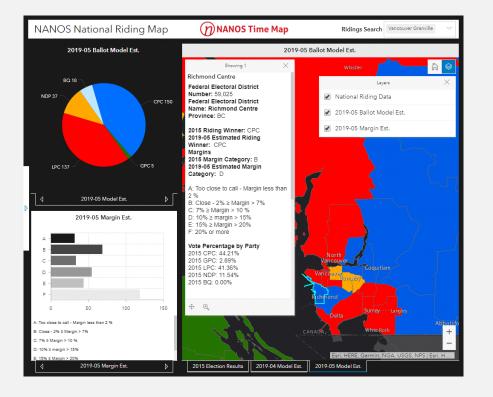
National Platform Navigation

- National Platform default opens to 2015 results & 2019 ballot estimates for monthly data waves
- All navigational tools are on the right side of the platform screen – i.e. data layers, riding search function, zoom & default positioning
- Press
 to select/change data layers within the respective data wave in view
- Monthly data waves are accessed at the bottom of all maps, graphs & charts
- Press ⁺/₋ & [^]/₀ at the right top/bottom screen to zoom in/out of the viewing area, or return to the default view position

Monthly Data Wave Access

NANOS Time Map Election Data | Mapping & Analysis

National Platform – Riding Level Data



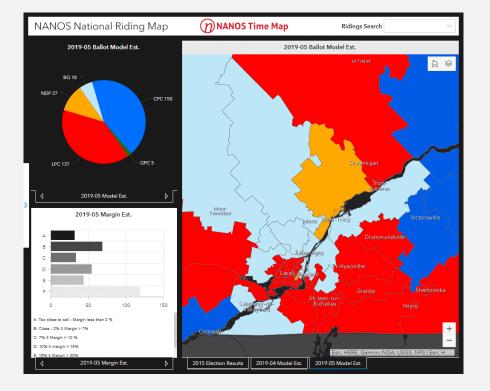
National Platform: Richmond Centre Pop-up Data

Riding Level Data

- All ridings have a pop-up menu allowing easy access to riding level data & model estimates
- Riding Data includes:
 - 2015 Election Data Results, Margins, and Party Rank
 - 2019 Nanos Model Estimates for Ballot, Margins, & Party Rank
- Data is colour themed for ease of visual comparisons
- Monitor trends for campaign impact & effectiveness
- Nanos data is updated monthly

NANOS Time Map Election Data | Mapping & Analysis

National Platform Data at the Riding Level



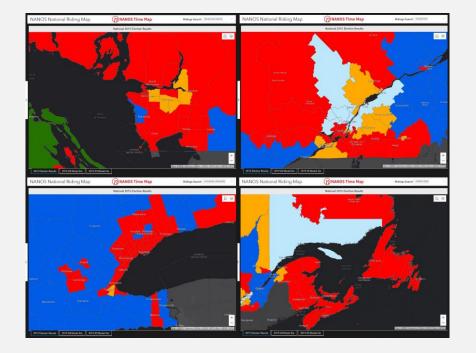
Riding Level Data

- 2015 Election results have been mapped for each riding
- 2019 Nanos modelling estimates are mapped across every riding
- Nanos model estimates include ballot, margin, & party rank at the riding level
- Nanos data is updated monthly
- Clients can monitor trends for campaign impact & effectiveness at the riding by riding level

2019 Ballot Model Estimates

NANOS Time Map Election Data | 2015 Election Results

Mining the 2015 Election Results



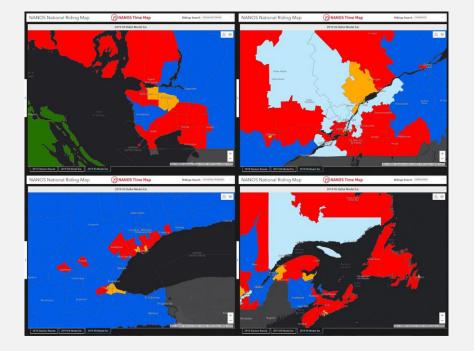
2015 Election Results – Riding Winners

2015 Election Results

- 2015 Election results have been mapped for each Riding across the country
- Data includes election results, margin data and party rank at the riding level
- Compare ridings won with margin and party rank data to identify areas of base support & voter concentration
- Zoom in for riding by riding analysis of individual ridings & regions

NANOS Time Map Election Data | 2019 Model Estimates

Targeting Resources Using Nanos Model Data



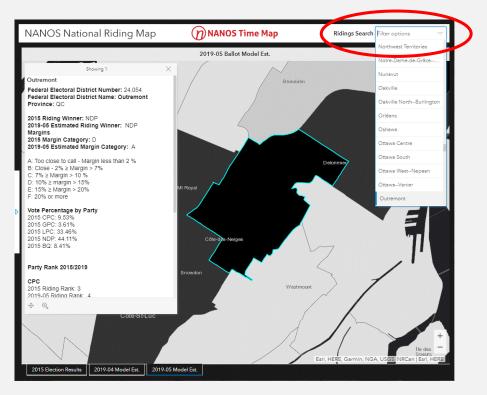
2019 Nanos Ballot Model Estimates

2019 Model Estimates

- 2019 Nanos model estimates are mapped across every riding
- Nanos model estimates include ballot, margin, and party rank data
- Compare 2015 results & 2019 monthly model estimates for all data levels
- Zoom in to target ridings with the platform riding search function
- Identify who's winning & ridings vulnerable to voter swings
- Effectively target resource deployment & refine campaign messaging
- Monitor & respond to trends at the national & individual riding level

NANOS Time Map Election Data | Too Close to Call

How to Access "Too Close to Call" Battlegrounds



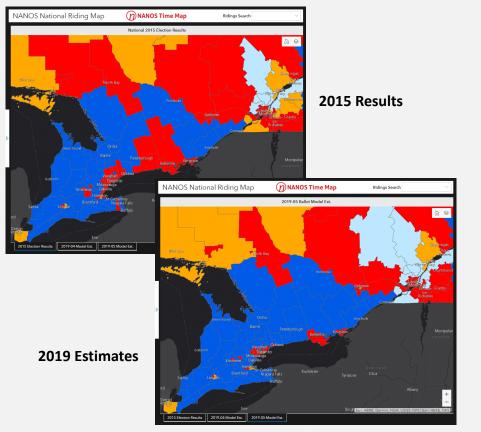
Riding Level Data

- 2015 Election Margin Results
- 2019 Nanos Margin Model Estimates
- Thematic results with darkest as "too close to call"
- Compare 2015 Margin Results with 2019 Margin Model Estimates
- Compare ridings and groups of ridings for regional analysis
- Identify battleground ridings
- Increase effectiveness in the deployment of campaign resources at the riding by riding level
- Nanos data is updated monthly

2019 Margin Data: Outremont

NANOS Time Map Election Data | Trends & Insights

How to Monitor Trends for Strategic Insight



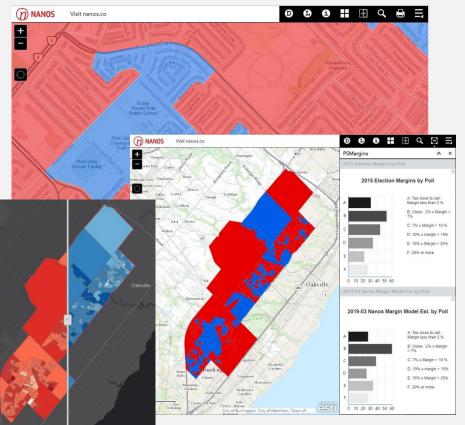
National Platform – Trend Analysis

Trends & Strategic Insights

- The Nanos Time Map National Platform allows clients to monitor trends of monthly Nanos estimate data
- Monitor monthly data estimates for ballot, margin, and party rank
- Cycle across the monthly Nanos model estimate waves on the National Platform map to visually observe trends
- Riding level pop-up numeric data & estimates is accessible for all data layers
- Monitor voter swings and respond to trends at the riding by riding level
- Monitor trends for strategic insight & data driven response

NANOS Time Map Election Data | Functions & Analytics

Visualization Tools & Analytic Functions

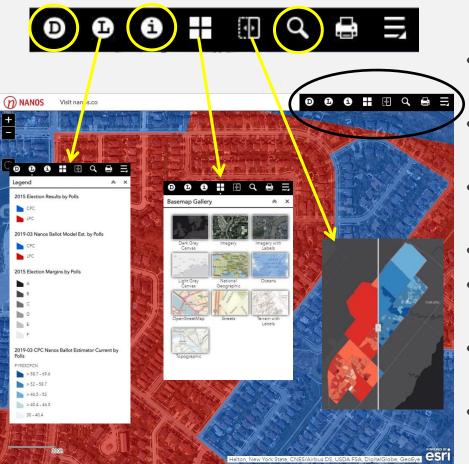


- Visualization tools such as "layer swiping" allows for easy visual comparison of data
- Transparency function can be applied to any data layer and allows for easy visual comparisons between layers
- Analytic functions such as charts & graphs allow for granular numeric comparisons
- Generate reports for comparative election results and ballot model estimates, margin categories, and consider model estimate data
- Nanos data is updated monthly

Oakville North Burlington

NANOS Time Map Election Data | Tools & Functions

How to Access Tools & Functions



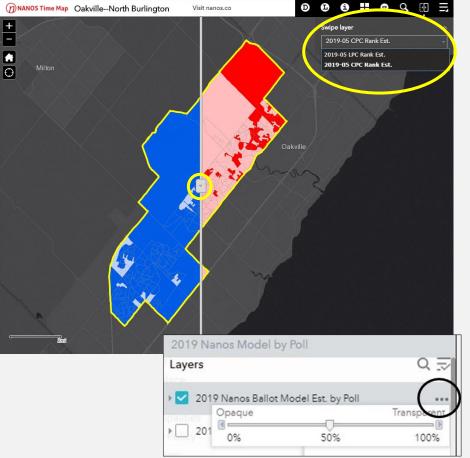
Tools & Functions

- Access to all tools and functions are found at the top right menu
- Press D to select/change data layers
 for 2015 results & 2019 estimates
- Press to access the legend which shows data layer order and contents
- Press In to launch the "layer swiping" function to compare data layers
- Press to access the mapping platform's GIS search function
- Press

 to access the information
 menu for background & guidance

NANOS Time Map Election Data | Tools & Functions

How to Access Layer Swiping & Transparency

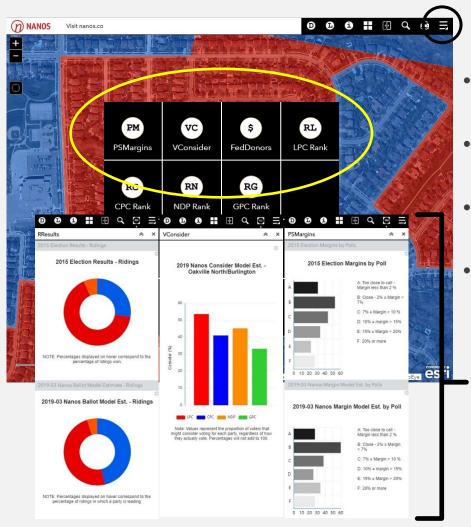


Data Layer Swiping & Transparency

- Access to all tools and functions are found at the top right menu
- Press D to select/change data layers for 2015 results & 2019 estimates
- Press In to launch the "layer swiping" function to compare data layers
- Select the data layer to be swiped from the "Swipe Layer Menu"
- Press and hold and sweep across the screen to visually compare data layers
- Press … in the data layer menu to access the transparency function for data layer comparisons

NANOS Time Map Election Data | Reports & Analytics

How to Access Reports & Analytics

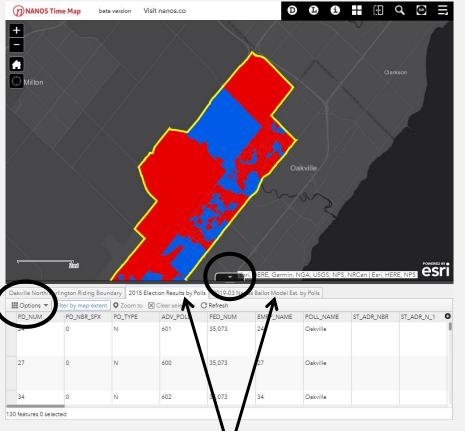


Reports & Analytics

- Access to all reports and analytics are found at the top right menu
- Press to access the menu for reports and analytic charts and graphs
- Press various report widgets to generate reports for comparative election analysis
- Generate 2015 results & 2019 model estimate comparative reports on:
 - Election Results & Ballot Estimates by Poll
 - Election Margin & Margin Estimates by Poll
 - Nanos Consider Model Estimates
 - Party Ranking
 - Donations by Party

NANOS Time Map Election Data | Data Export Function

How to Export Data to a CSV Format File



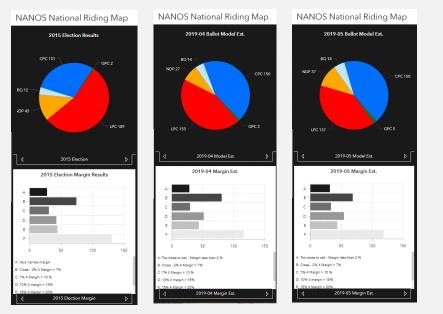
Corresponding Data Tabs for Selected Data Layers

Data Exporting

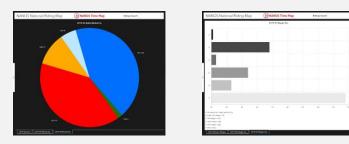
- Access to data exporting is available for all 2015 Result & 2019 Model Estimates
- Press to access and view the Data Attribute Table for select data layers
- Corresponding data layer tabs can be accessed for selected data layers
- Select a data layer for export
- Press *moptions* to access the menu for data filtering, view adjustment & exporting
- Select "Export all to CSV" to export
- 2019 Nanos Ballot Model Estimate data is updated monthly and cumulative for export

NANOS Time Map Election Data | Reports & Analytics

How to Access Reports & Analytics



 \leftarrow Cycle Through Monthly Data Wave Reports \rightarrow



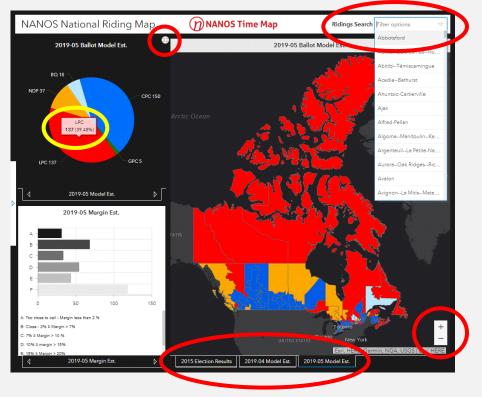
Generate Full Screen Reports for Data Wave Comparison

Reports & Analytics

- Access to all reports and analytics are displayed on the left side of the National Platform screen
- Cycle through monthly data wave reports for both visual and numeric data comparisons
- Generate full screen data reports for easier data wave cycling comparisons
- Generate 2015 results & 2019 model estimate comparative reports on:
 - Election Results & Ballot Estimates by Riding
 - Election Margin & Margin Estimates by Riding
- Nanos data is updated monthly

NANOS Time Map Election Data | Tools & Functions

How to Access Tools & Functions



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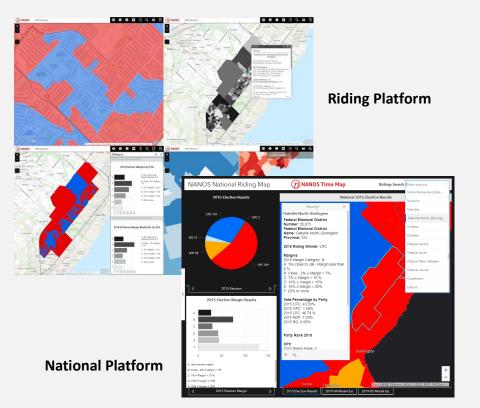
Tools & Functions

- Access to all tools and functions are found at the top right menu
- Press to select/change data layers for 2015 results & 2019 estimates
- Press to access the legend which shows data layer order and contents
- Press to select a base map option
- Press to launch the "layer swiping" function to compare data layers
- Press to access the mapping platform's GIS search function
- Press to access the information menu for background & guidance

National Platform – Tools & Functions

NANOS Time Map Election Data | Campaign Planning

Plan Your Campaign for Maximum Impact



Oakville North Burlington

- The Nanos Time Map platform is a unique campaign resource tool
- Polling station level data allows for more efficient campaign planning & resource deployment
- Monitor trends to more effectively respond to changing dynamics & target strategic ridings & neighbourhoods
- Refine & target messaging for greater impact and effectiveness
- Plan campaign strategies to better align historic financial support & fundraising campaigns & outreach
- Strategic resources for national, riding & polling station level campaigns

NANOS Time Map Limitations | Usage & Modelling

- Flat rate subscriptions are for single log-in access. Results of the Nanos modelling data are for paid subscribers and are not to be publicly disseminated, released or shared with any third party *without exception*.
- The Nanos political sentiment modelling does not factor the unique combination of candidates or unique news and political events at the riding level. It uses historical voting behaviour and current public opinion research sentiment to estimate possible changes in political sentiment and party support at the riding and polling station level.
- Nanos modelling does not include any historical data for the People's Party of Canada.
 Nanos is currently updating its model to factor the People's Party of Canada.
- The Nanos modelling is intended to be a complement to, and not a replacement for, conducting quantitative research at the riding level which is a bespoke snapshot of opinion.
- The Nanos modelling can provide an approximation of the impact of national events at the riding and local level.
- The mapped data on political donations is from publicly available sources. Nanos maps to a 5-digit postal code to help mask the identity of individual Canadians.
- Historical election results and polling station definitions use publicly available datasets from Elections Canada.



More about the Nanos data

NANOS Time Map What they say about Nanos data

La firme Nanos est celle qui avait prédit avec le plus de précision les résultats des élections fédérales de 2004, 2006, 2008, 2011 et 2015. Joël-Denis Bellavance, La Presse

Nanos Research called the final result almost perfectly, given that their final (Oct. 18) telephone poll was off a miniscule 1.8 percentage points combined for the three leading parties. **Alex Roberts, The Chronicle Herald**

One pollster who was not talking about lessons learned was Nik Nanos of Nanos Research. He came the closest of all the top pollsters in assessing party support, including the Conservatives, whom he pegged at almost 39 percent, based on Sunday polling. Janice Tibbetts, ipolitics.ca

Politicians always say that the only poll they count is the one on Election Day but the reality is that they are huddled in their back rooms poring over the Nanos numbers. John Honderich at the GTR Economic Summit

Nanos's numbers have become the 'gold standard' in Canadian political polling in recent years as he keenly intuited the nuance of voters' mood and intentions.

Robin V. Sears, Policy Options Magazine

Historically one of the most accurate polling firms in Canada. **Reuters Canada**

Nanos Research, which did nightly tracking for The Globe and Mail and CTV News, was remarkably on target throughout the campaign, recording the nuanced shifts as the Liberals moved from third to pull ahead of the NDP and Conservatives. **Mark Hume, The Globe and Mail**

An exclusive Brunswick News and Nanos Research poll entering the final weekend of the New Brunswick election campaign ended up mirroring the actual popular vote. **Telegraph Journal**

Finally, in fairness to a couple of pollsters, Nik Nanos, whose nightly polling was done for CTV [...] was very close to the actual results for the three major parties. Lorrie Goldstein, Toronto Sun

Nanos Research posted final polling numbers that closely mirrored final results in terms of popular vote on its last day of polling Sunday.

Steve Ladurantaye, Globe and Mail

For my money, I like Nanos Research. Dan Lett, Winnipeg Free Press

Nanos won the crown for most accurate polling. Ira Basen, CBC News

NANOS Time Map A track record you can trust

Year	Federal Party	Final Election Polling	Election Results	Variance	Sample Size (Decided Voters)	Margin of Error
Cor 2015 ND Gre	Liberal	39.1%	39.5%	0.4	n=722	±3.7
	Conservative	30.5%	31.9%	1.4		
	NDP	19.7%	19.7%	0.0		
	Green	4.6%	3.4%	1.2		
	Bloc	5.5%	4.7%	0.8		
NDF 2011 Libe Bloc	Conservative	38.7%	39.6%	0.9	n=702	±3.7
	NDP	30.5%	30.6%	0.1		
	Liberal	20.9%	18.9%	2.0		
	Bloc	5.0%	6.1%	1.1		
	Green	4.0%	3.9%	0.1		
Liber 2008 NDP Bloc	Conservative	37.1%	37.6%	0.5	n=423	±4.8
	Liberal	26.7%	26.2%	0.5		
	NDP	20.3%	18.2%	2.1		
	Bloc	8.7%	10.0%	1.3		
	Green	7.1%	6.8%	0.3		
Lik 2006 NI Ble	Conservative	36.4%	36.3%	0.1	n=1,051	±3.0
	Liberal	30.1%	30.2%	0.1		
	NDP	17.4%	17.5%	0.1		
	Bloc	10.6%	10.5%	0.1		
	Green	5.6%	4.5%	1.1		
C 2004 N B	Liberal	34.2%	36.7%	2.5	n=977	±3.1
	Conservative	30.4%	29.6%	0.8		
	NDP	19.5%	15.7%	3.8		
	Bloc	12.2%	12.4%	0.2		
	Green	3.7%	4.3%	0.6		

(n) NANOS Time Map In the news

Nanos book on 'voter rage' hitting shelves in three countries

Yellow Vest, other protesters could be wild card in next election, says Nanos

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Most Canadians believe Russia is using social media to meddle in western elections: Nanos survey

Instead of worrying about Scheer's performance, **Conservatives should** be concerned about Bernier as a 'disrupter' in next election, says pollster Nanos

Liberals rebound in polls, MPs point to economy, but Nanos says women give Grits lead over Tories

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Majority of Canadians would boycott U.S. in response to trade war: Nanos survey

Canadians divided on best way to solve energy woes: Nanos poll

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NANOS Time Map Contacts & Coordinates



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NANOS Time Map Nanos Group of Companies

NANOS R E S E A R C H

As one of North America's premier market and public opinion research firms, we put strategic intelligence into the hands of decision makers. The majority of our work is for private sector and public facing organizations and ranges from market studies, managing reputation through to leveraging data intelligence. Nanos Research offers a vertically integrated full service quantitative and qualitative research practice to attain the highest standards and the greatest control over the research process. www.nanos.co

nanos dimap analytika

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This international joint venture between <u>dimap</u> and <u>Nanos</u> brings together top research and data experts from North American and Europe to deliver exceptional data intelligence to clients. The team offers data intelligence services ranging from demographic and sentiment microtargeting; consumer sentiment identification and decision conversion; and, data analytics and profiling for consumer persuasion. <u>www.nanosdimap.com</u>

NANOS RUTHERFORD McKAY & Co.

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