

**BLPremium**  
INSIGHTS

ELECTION  
DIRECTIONS

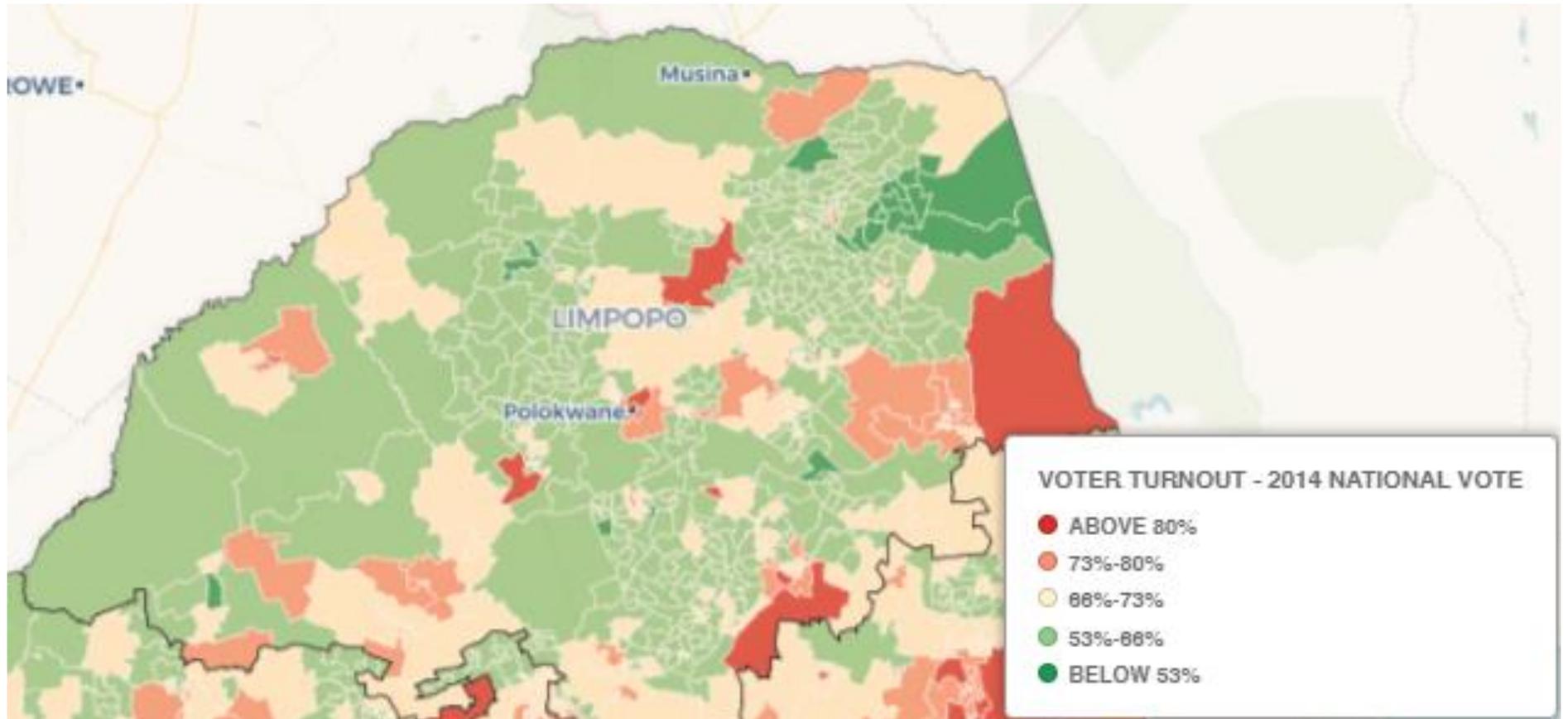


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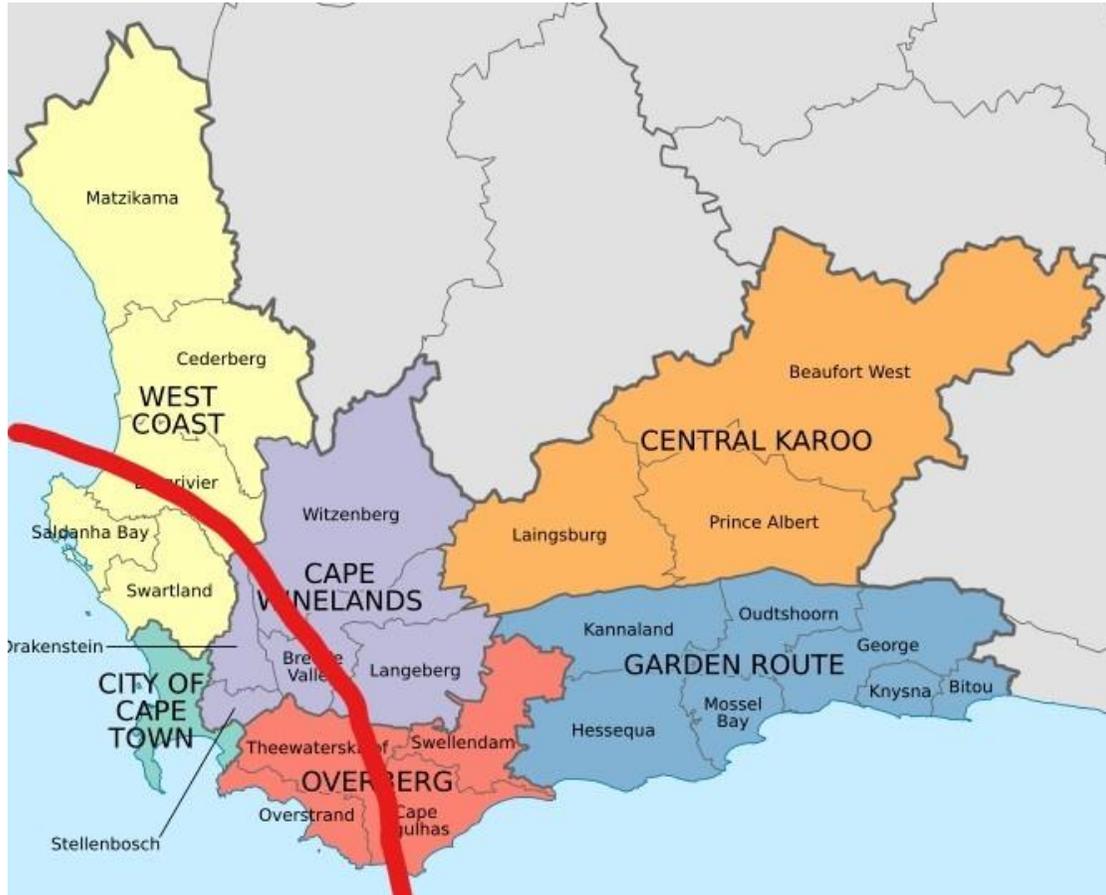
# What data science is and what it isn't

Data science	Not data science
Science	Magic
Part of a journalist's toolkit	Something to replace traditional journalism
Identifier of trends and themes	Useful for telling in-depth stories without investigative journalism
Assigning probabilities to different outcomes and scenarios	Making exact predictions about future events

# Data science = 'what' – but we still need 'why' and 'how'



# Don't let the computer do your thinking for you



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## What are some of our assumptions and observations?

- National / provincial elections are different from municipal elections
- The turnout of ANC voters and young voters will decide the 2019 election
  - Low ANC turnout in 2016 was devastating in Gauteng, Nelson Mandela Bay
  - Over nine million registered voters – a third of the total - are younger than 35.
- Lower turnouts are not just bad for the ANC. They're also difficult to model
  - A smaller pie and more fracturing of the vote makes the model sensitive to small changes

# Voting patterns at the provincial level

	Number of votes cast			Change in votes	
	2004	2009	2014	2004-2009	2009-2014
Eastern Cape	2 310 226	2 344 098	2 278 555	33 872	65 543
Free State	1 042 120	1 069 127	1 051 027	27 007	18 100
Gauteng	3 553 098	4 391 699	4 638 981	838 601	247 282
KwaZulu-Natal	2 807 885	3 574 326	3 935 771	766 441	361 445
Limpopo	1 686 757	1 570 592	1 543 986	116 165	26 606
Mpumalanga	1 157 963	1 363 836	1 408 269	205 873	44 433
North-West	1 353 963	1 135 701	1 147 786	218 262	12 085
Northern Cape	329 707	421 490	443 714	91 783	22 224
Western Cape	1 621 839	2 049 097	2 188 236	427 258	139 139
<b>Total</b>	<b>15 863 558</b>	<b>17 919 966</b>	<b>18 654 771</b>	<b>2 056 408</b>	<b>734 805</b>

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# Modeling election results

- Deterministic versus probabilistic models
  - Every event – every general election, by-election, survey or opinion poll – reveals a voter's opinion at one moment in time. Opinions change.
  - Recent events are a good starting point but there's a degree of randomness.
  - Rather than predict an exact result, the model assigns probabilities to different results and calculates a range of the most likely outcomes
  
- Flipping a coin....one hundred thousand times
  - A Monte Carlo simulation is an algorithm that uses repeated random sampling to solve problems that are probabilistic in nature.
    - Example: if you assume that a certain type of voter will vote for the ANC 70% of the time and for the EFF 10% of the time, you can use a Monte Carlo simulation to work out the range of outcomes for this type of voter

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## The “Theory of the three gates”

(© ® & ™)

1. You must be over 18 years old to vote
2. You must be registered to vote
3. You must show up at a polling station on election day to vote

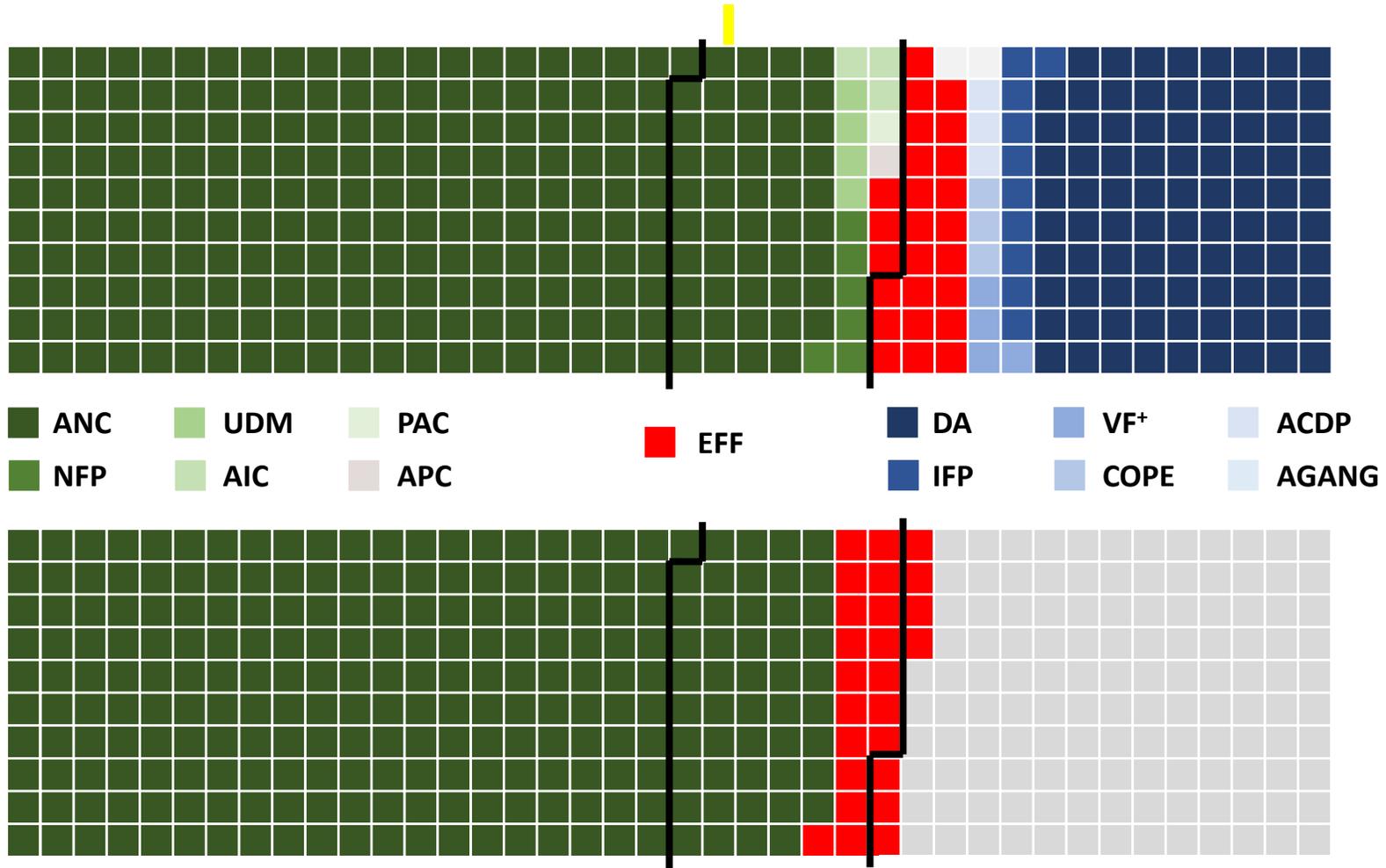
What is going to happen when we interrogate these three gates?  
How will it change our assumptions about the youth vote, the urban vote, and so on?

## The three gates in 2014 and 2019

	First gate (over 18s)	Second gate (registered voters)	Third gate (voter turnout)
2014	34.5-million people	25.4-million people (74 percent of people through the first gate)	18.7-million people (73 percent of people through the second gate, 54 percent of people through the first gate)
2019	37.8-million people	26.8-million people (71 percent of people through the first gate)	???

- The twenty-something age cohort is the largest through the first gate, but the second-largest through the third gate – older people register and vote at higher rates
- Women make it through each gate at progressively higher rates: women make up 52 percent of the population, 55 percent of registered voters and 57 percent of actual voters
- A smaller share of the population has made it through the second gate compared with 2014, and voter turnout is likely to be lower than in 2014 too.

# The 2014 SA Parliament: majorities and super-majorities



## Three outcomes and three scenarios

	I	II	III
ANC	57%	67%	48%
DA	23%	18%	27%
EFF	11%	8%	14%
IFP	3%	3%	4%
Others	6%	4%	7%

Scenario I: The house view

ANC loses 4 percent of the vote, opposition parties make incremental gains

Scenario II: A old dawn

ANC makes a stunning recovery

Scenario III: A new game

ANC falls below 50 percent. A coalition / minority government formed. The DA, EFF make huge gains

In the unlikely event that the ANC improves on its 2014 showing, this could give Cyril Ramaphosa an improved mandate to implement reforms – or it might lead to greater complacency within the ANC. Any result below 55 percent will place great pressure on Ramaphosa and an outright loss of a majority will greatly increase uncertainty and volatility both inside and outside of the party.

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## Predictions at the provincial level

- Gauteng has a 50/50 chance of having the vote split
  - The ANC has an even chance of falling below 50 percent of the vote, but would still have the easier path to a majority coalition
- The DA should hold on to the Western Cape
  - De Lille's GOOD party is not expected to win more than 5 percent of the provincial vote
- The ANC should hold all the other provinces, but there is room for minor upsets
  - In a worst-case scenario for the party, it could get pushed down to around 55 percent of the vote in the North-West and Limpopo
  - There's a good chance of the ANC giving back the gains it won in KwaZulu-Natal during the Zuma years, and losing more ground in provinces like the Eastern Cape

## One or two scenarios from leftfield and beyond....

Scenario	How could it happen?	Probability?
DA loses the Western Cape	Low turnout of DA voters, a recovery by the ANC, outsize support for de Lille's GOOD party	Fairly low. The DA is expected to win over 55 percent of the provincial vote
ANC loses the Northern Cape	Low ANC turnout, significant growth in the opposition vote	Low. About half of the population lives in the north-eastern corner of the province, and strongly supports the ANC
ANC loses the North-West	Low turnout from ANC voters, growth from the EFF, F4SD	Very low. Turnout has been falling steadily in the province over the last three elections

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