



## ELOG PVT METHODOLOGY

The Parallel Vote Tabulation (PVT) is an internationally recognized methodology for nonpartisan citizen observer groups to assess the electoral process and to verify official election results. A PVT is based on deploying highly trained observers to systematically assess the opening, voting and counting processes, and the results for the presidential election. Observers complete their standardized observational forms at the polling stations, and send their information through the mobile phones to a central database for observer groups.

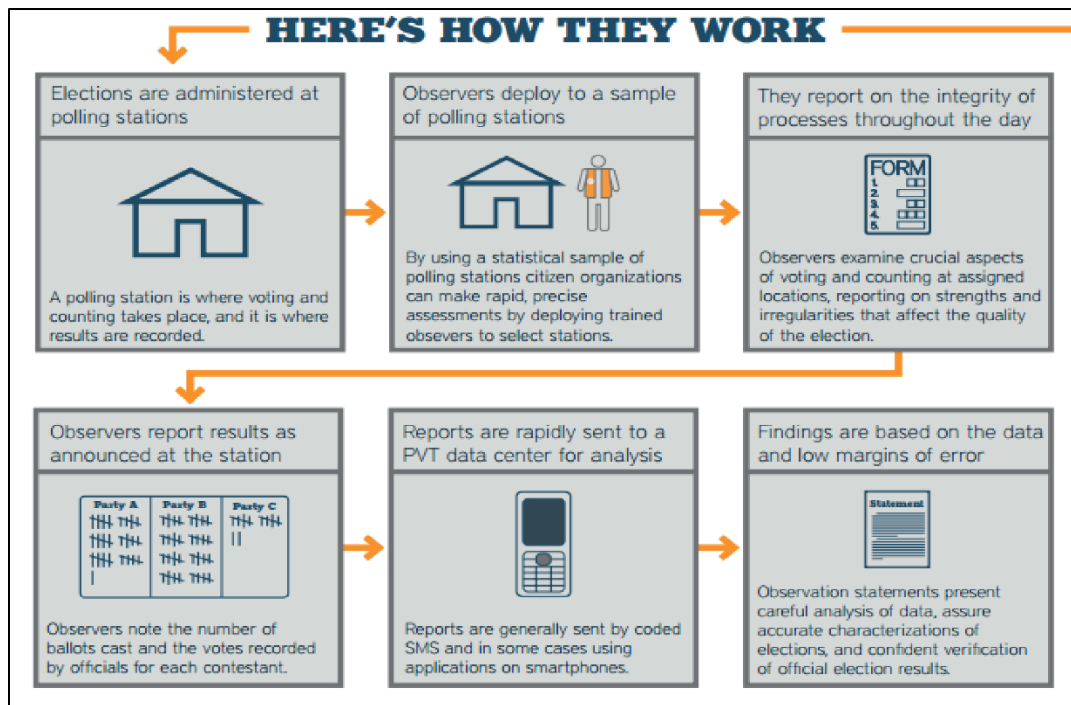
The PVT is based on sound and time tested statistical principles. Since the PVT methodology deploys observers to a **nationally<sup>1</sup>, representative<sup>2</sup>** (*see the appendix of the sample distribution*) random sample of polling stations, the data that they collect can be used to **systematically assess** the quality of the process and formulate an accurate projection of the election's results on a national scale. On that basis, PVTs can provide the most comprehensive and accurate picture of the electoral results and the results.

PVTs have been conducted throughout Africa for the last two decades, including Ghana, Kenya, Malawi, Nigeria, and Zambia. PVTs, properly done by citizen groups, reduce uncertainty from the election environment by providing careful analysis of observer findings. Where PVTs expose fraud, or identify official problems in the process, they provide an objective basis for understanding the negative effects or for seeking peaceful solutions of complaints, hence they reduce the potential for political conflict.

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<sup>1</sup> Nationally – the sample covers all the counties and all the constituencies in the country.

<sup>2</sup> Representative – all the polling station have an equal chance of being selected. This helps ELOG to speak on the process and results even in the polling stations that did not have an ELOG observers. Just the same way you do not need to drink all soup to know how it tastes.



*Illustration 1: How the PVTs work.*

## ELOG 2017 PVT

The 2017 ELOG PVT employed a nationally, representative sample of 1,000 polling stations from the official list of 40,883 polling stations gazette by the IEBC. These stations were stratified by county and constituency to ensure that it is descriptive of all of Kenya. This means that the percentage of sampled polling stations closely matches the percentage of the polling stations in the county compared to the rest of the country. For example, Bungoma county has 1,186 polling stations which represents 2.90% of all polling stations in Kenya. ELOG had 29 observers which represents 2.90% of all observers deployed and so on for all the counties. Through this sampling, the distribution of observers is proportionate to the percentage of polling stations in each county and constituency, ensuring that the overall picture of voting and counting provided is more accurate.

In more technical terms, the sampling methodology employed to draw the ELOG PVT national sample can be described as using a classic single stage cluster sampling and proportional stratification.

Table 1 below shows the sampling distribution by county.

County	IEBC List of Polling stations		ELOG PVT Sample	
	Polling Stations		Polling Stations	
	Number	% Number	Number	% Number
BARINGO	892	2.18%	21	2.10%
BOMET	728	1.78%	17	1.70%
BUNGOMA	1,186	2.90%	29	2.90%
BUSIA	760	1.86%	19	1.90%
DIASPORA	10	0.02%	1	0.10%
ELGEYO/MARAKWET	529	1.29%	13	1.30%
EMBU	710	1.74%	17	1.70%
GARISSA	381	0.93%	10	1.00%
HOMA BAY	1,062	2.60%	26	2.60%
ISIOLO	195	0.48%	5	0.50%
KAJIADO	797	1.95%	19	1.90%
KAKAMEGA	1,497	3.66%	37	3.70%
KERICHO	780	1.91%	20	2.00%
KIAMBU	1,963	4.80%	48	4.80%
KILIFI	988	2.42%	24	2.40%
KIRINYAGA	659	1.61%	17	1.70%
KISII	1,126	2.75%	27	2.70%
KISUMU	1,027	2.51%	25	2.50%
KITUI	1,454	3.56%	35	3.50%
KWALE	612	1.50%	15	1.50%
LAIKIPIA	531	1.30%	13	1.30%
LAMU	167	0.41%	4	0.40%
MACHAKOS	1,332	3.26%	33	3.30%
MAKUENI	1,060	2.59%	26	2.60%
MANDERA	401	0.98%	10	1.00%
MARSABIT	384	0.94%	9	0.90%
MERU	1,473	3.60%	36	3.60%
MIGORI	826	2.02%	21	2.10%
MOMBASA	934	2.28%	23	2.30%
MURANG'A	1,131	2.77%	27	2.70%
NAIROBI CITY	3,378	8.26%	82	8.20%
NAKURU	1,806	4.42%	45	4.50%

NANDI	796	1.95%	20	2.00%
NAROK	750	1.83%	18	1.80%
NYAMIRA	553	1.35%	14	1.40%
NYANDARUA	654	1.60%	16	1.60%
NYERI	917	2.24%	22	2.20%
PRISONS	103	0.25%	2	0.20%
SAMBURU	284	0.69%	7	0.70%
SIAYA	916	2.24%	22	2.20%
TAITA TAVETA	354	0.87%	8	0.80%
TANA RIVER	307	0.75%	8	0.80%
THARAKA - NITHI	625	1.53%	16	1.60%
TRANS NZOIA	639	1.56%	16	1.60%
TURKANA	644	1.58%	16	1.60%
UASIN GISHU	868	2.12%	21	2.10%
VIHIGA	548	1.34%	13	1.30%
WAJIR	434	1.06%	10	1.00%
WEST POKOT	712	1.74%	17	1.70%
<b>Total</b>	<b>40,883</b>	<b>100.00%</b>	<b>1,000.00</b>	<b>100.00%</b>

The above table demonstrates that the ELOG PVT sample was representative (the distribution patterns for ELOG and IEBC closely match) and unbiased (each of the sampled polling station was randomly selected. Since ELOG observers send their observational reports through short messaging service (SMS), the speed of transmission means the results were calculated instantaneously and that the release of the results by IEBC can be immediately verified.