Raising Trust in Electoral Technology;
Innovation Aided by Traditional Approaches

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Ladies and gentlemen, friends. Good morning.

I am truly honored to stand in front of such a great group of friends, colleagues and electoral leaders from Africa and around the world. I, and IFES, thank the INEC, ECONEC and ECF leadership, our friends at ECES, and all of you for this opportunity.

Today I will share with you our thoughts on **"Raising Trust in Electoral Technology; Innovation Aided by Traditional Approaches"**. I will expand upon the analysis I last shared in my plenary speech at the Bucharest AWEB global conference for EMBs back in September 2017.

My daytime job is that of a general electoral manager, but I must confess that I am also a technology geek - passionate about how technology can best contribute to a better future for my, and for our, children. In my 20 something years of working on elections worldwide, I have led, assisted and observed major technology projects being implemented. I have been a proud participant in successes, and I have suffered in failures. It has been a sobering journey and I would like to share a few thoughts with you on why I think **traditional thinking and approaches are fundamental for the evolution and implementation of electoral technologies** - in the context of our overarching shared pursuit of more effective, and more transparent and trusted electoral processes and outcomes.

For decades, many have **hoped that technology would revolutionize how elections are conducted**. Replacing traditional paper-based approaches, it was believed that technology would present a dramatic **improvement in voter identification, faster and easier voting and results tabulation, higher accuracy, increased transparency, integrity and public trust, and comparatively lower cost**.

Unfortunately, **this promise has yet to be fulfilled.** An overwhelming number of incidents show that **electoral technologies have proven vulnerable to failure and security breaches, distrust by both contestants and voters, inflated cost, and to legal challenges**.

In addition to actual vulnerabilities, electoral technologies are susceptible to misperceptions and suspicions, which can serve as powerful tools to delegitimize elections - a tactic that is increasingly being exploited by losing political contenders, and their high-paid sophisticated advisers, especially in closely fought, high-stakes elections.

Electoral management bodies are under enormous pressure to implement new technologies; by politicians, by civil society, by vendors, and by the misperception that progress, or being modern, equates to using cutting-edge technology wherever possible. **Electoral leaders must resist these pressures and let good judgement and common sense prevail**.

At IFES, we sincerely believe that **electoral technologies can indeed significantly improve the quality of the electoral process, if wisely used to enhance traditional approaches**, **not as an immediate and wholesale replacement of these**.

We believe that **traditional paper-based approaches and electronic systems both have significant advantages and weaknesses. Used together, they mutually reinforce each other, leveraging the significant synergy between the old and the new**.

An EMB should be proud of its performance if able to deliver a well-organized election that is transparent and trusted. The technology used to accomplish this is secondary. For example, if **an EMB can implement traditional paper balloting and a well observed manual count, combined with secure electronic result transmission and tabulation, that is reason for pride**. There are many countries in the world that hold effective and trusted elections with paper and pen. **Even better if, for example, hand-signed results forms and tabulation reports are immediately made available online for public scrutiny and extensive parallel vote tabulation efforts**, all of which increase the transparency and accountability of the process.

One fundamental problem is that the discussion, decision and implementation of new technology are too energy-draining for many EMBs who have limited time and resources. **Not only do many EMBs struggle to establish appropriate procedures and training for the new technologies, unfortunately, they also neglect to maintain their traditional mechanisms. These two factors together create immense risks for their elections.**

To illustrate such risks, you might recall what is considered the largest ever government data breach which happened April 2016, affecting 55 million voters in the Philippines. Voters' data was widely distributed on both the normal and the dark web and included over 200,000 email addresses; 1.3 million passport data of overseas Filipino voters; and 15.8 million fingerprint records. Also, that same month, more than 93 million Mexican citizens had their voter registration details exposed online due to a misconfigured database. The examples go on and on, and obviously include the unfolding revelations on Russian industrial strength interference in western electoral events. The examples go on and on, and obviously include the unfolding revelations of Russian interference in Western electoral processes. Looking at the evolution of these highly sophisticated cyber attacks, let me assure you; building systems that are as protected as possible from known external attacks is no longer sufficient. **We must now build systems and methodologies that assume the possibility of full penetration**, with provisions in place to ensure the longevity of said system even after major breaches.

The last decade has been sobering when it comes to the opportunities and risks associated with emerging electoral technologies. Now, more than ever, we believe that modernization has to be approached carefully. **All available options must be considered; not only through a careful examination of existing technologies, but also exploring the option to create homegrown solutions that perform better in the national context - and, importantly, examining the pros and cons of adopting or strengthening existing and more manual approaches**. Many developed high-tech democracies have recently reviewed their technology ambitions and decided to stay with or even return to more traditional approaches, most notably regarding paper balloting. Examples include Norway, Australia, Germany, Denmark and others.

At IFES we have a simple suggestion: **solid, patient management and excellent leadership when considering modernization - and the role that technology will play within this**.

When introducing new technology, tried and tested traditional aspects must receive particular attention. It took centuries to develop the processes and procedures that make the paper-based system transparent and trustworthy. Developing similar processes and procedures for new technologies is much more challenging, but we often neglect its importance. **Aspects of traditional approaches that deserve attention include:**

- **a comprehensive legal and procedural framework;**
- **inclusive and consultative system design and implementation;**
- **transparent and auditable paper and digital evidence;**
- **training and accountability; and,**
- **building trust through public information and interaction**.

Yes, we believe that **electoral leaders must demand a broader, more open, and careful deliberation of technology choices.**

EMBs should seek to change the optics when introducing technology into the electoral process from a "black box" into a "glass box". This means that there should be a public dialogue in advance to any decisions made about which part of the election process needs focus. **Particularly, we have seen a need for a more open dialogue on procurement processes**. In far too many countries, the only information made available on procurement is merely to deflect charges of corruption or favoritism, rather than cease the important opportunity to truly involve and to educate relevant external stakeholders on the procurement process.

Secure and safe utilization of technology in elections is a multi-stakeholder responsibility. Parliaments and governments should dedicate significant care and attention to this, and make sure that changes are implemented properly and with due diligence. The IT community should be engaged in finding vulnerabilities, and then in designing ways to fortify these. Civil society should take a greater interest in this sphere and develop the technical skills to properly monitor and assess the environment. Additionally, practitioners and academics should work together to harness national and global experiences towards long term improvements in this field.

To inspire all of this, electoral leaders can insist that the introduction of new technology be subject to a multi-stakeholder, comprehensive, well-resourced feasibility study. Such a feasibility study can be structured in many ways. We, at IFES, have strived to capture the best practices from around the world in our **published methodology for feasibility studies**.

Key features of this approach include:

- Initiating the study with a formal well-published basis for the effort, for example, in a **Terms-of-Reference** promulgated by the EMB;
- Convening a well-resourced **Feasibility Study Committee** with broad membership, including external technology experts, civic society and academia - working in a

transparent and consultative manner to build trust around the entire process and the final recommendations;

- At the outset of the study, **assessing the system already in place** and the actual cost of this, having a strong baseline to work from; answering the question **"what problem are we trying to solve with the new technology"**, and through this establishing clear objectives for the study;
- Identifying all **potential methodologies and technologies, followed by analysis of all factors affecting the choice**: functionality, security, total cost of ownership, required legal framework, EMB capacity development, training, voter education requirement, and so forth;
- **Well-managed and ethical vendor involvement**, where all vendors have an equal opportunity to make their case. This can include a vendor fair where external stakeholders, such as contestants, are also invited to see and feel the technologies available and, again, build trust around the process; and,
- Towards the end of the study, conducting **comprehensive pilot tests** of two or more methodologies in unofficial elections, scrutinizing all aspects of a proposed methodology in real life.

If anything, my presentation today may have shown how complex, misunderstood and risk prone the promise of modernization through new electoral technology is. **In order to assist EMBs to better study and analyze this conundrum, IFES, under our DATA project, will be adding a comprehensive and carefully curated list of election technology resources into a dedicated portal on ACE, the Electoral Knowledge Network practitioners' website**. This is to ensure there is one updated portal where practitioners, academics and others can go for resources - for discussion on technology and data security in elections. **A preview of this resource list can be downloaded from this link: https://tinyurl.com/yak6obo4.**

In closing, knowing how much information will be presented to you over these busy days, I hope that you may remember these **three key points** from my presentation:

- Electoral **technology is not a panacea**, but if chosen wisely, and combined with sound, proven traditional approaches, it can have a positive impact;
- **Resist pressure** from external actors, especially from vendors and contestants, and carefully approach the notion of having to be "modern"; and,
- Control the process by tempering it within a mandated, deliberate, transparent and participatory **feasibility study**.

Thank you for your immense patience with me.

IFES and I hope that we can be of assistance to many of you in the years to come.