

30th June 2021 National Communications Secretariat Ministry of ICT, Innovation and Youth Affairs Nairobi, Kenya Via Email.

Dear Sirs,

RE: SUBMISSION ON THE DRAFT NATIONAL NAMING AND ADDRESSING POLICY AND BILL 2021

We refer to the above matter and your letter dated 14th June 2021 inviting American Chamber of Commerce, Kenya to submit comments on the National Naming and Addressing Policy and Bill 2021.

Overall, our assessment is that the draft National Addressing Policy and Bill are progressive and lay a good basis for what can be a robust, digitally enabled national addressing system that would pave the ground for Kenya's socio-economic transformation.

Specifically:

- The role of technology: The documents recognize the role that existing technology can play in solving the challenge of addressing the unaddressed, particularly the role that the internet, smart phones and web mapping technologies have played in bringing innovative solutions that enable people, businesses and organizations establish a digital a presence, participate in the economy and locate each other.
- The opportunity to leapfrog from traditional to a state-of-the-art national addressing system through the adoption of geo-codes: The policy recommends the deployment of a digital National Addressing System to leapfrog national addressing from a naming and numbering exercise to a geo-map addressing system that will serve as an active asset with serviceable applications and recommends "a National Addressing System of Kenya (NASK) that will be geo-



coded to ensure that addresses are matched with geographic coordinates on a map".

• Considering existing innovations in developing addressing standards: The Policy also recognizes that the proposed National Addressing standards will accommodate all addressing types that are currently in use, particularly "*data contributors for geo-coded addresses in Kenya*". One of the common open-source digital addressing platform known as Plus Codes, has been further expounded in Annexure 2.

Please see annexed to this letter a detailed schedule setting out our comments and recommendations relating to the Policy and Bill.

Should you require any clarifications, please do not hesitate to contact me on (<u>Maxwell@amcham.co.ke</u>).

Yours faithfully,

to

Maxwell Okello *Chief Executive Officer*

American Chamber of Commerce, Kenya





AMCHAM SUBMISSIONS ON THE NATIONAL ADDRESSING POLICY AND BILL, 2021

THE DRAFT NATIONAL ADDRESSING POLICY			
Issues/Provision in	Provisions in National	Recommendations/Comments	
the Policy	Addressing Policy 2021		
Need for referencing of the ISO Standard 6709: Standard Representation of Geographic Point Location by Coordinates	Paragraph 11.1: Standards References the ISO 19160 International Address Standard suite as one of the standards that will be used to guide the development of a national standard	Include the ISO Standard 6709: Standard Representation of Geographic Point Location by Coordinates. This is the ISO standard for representation of latitude, longitude and altitude for geographic point locations. Latitude and longitude grid is a baseline international system by which the position or location of any place on earth can be determined and described. It is the baseline and logic on which most mapping systems are built.	
		Insert a new paragraph	
		11.2(b): ISO Standard 6709: <i>Standard</i> <i>Representation of Geographic Point Location</i> <i>by Coordinates</i> is applicable to the interchange of coordinates describing geographic point location. It specifies the representation of coordinates, including latitude and longitude, to be used in data interchange. It additionally specifies representation of horizontal point location using coordinate types other than latitude and longitude. It also specifies the representation of height and depth that can be associated with horizontal coordinates. Representation includes units of measure and coordinate order.	
The policy recognises the "opportunity for	Paragraph 3.4: National Addressing Standards	Even though these formats are stated to be examples, a risk may arise that the	



the development of an The Standards will addressing system that *designate the "NASK* is geo-coded" (para. Address" model that will 1.1) and "recommends be adopted by Kenya. It NASK addresses to be *will define the parent* geo-coded" (Chapter 2 (primary) and a child item no. 7), the (secondary) address. A parent address format National Addressing *provides the basic* System of Kenya location identifiers while (NASK) modelling of *a child address offers* address formats and ancillary information. types set out in paragraph 3.4 does not *For example, a parent* address format include a geo-code. provides for the Address Number, Road Name or alphanumeric descriptor Ward + County + *Postcode e.g.;* 1963, Independence Day Street, Nairobi Central, Nairobi. *In cases where the road* has not been named the address would read 1963, KE1212 - 63, Nairobi Central, Nairobi (*KE*1212 – 63 being an automatically generated NASK Address". A Child address format: Property Name, Address Number + Road Name or alphanumeric *descriptor* + *Locality* + ward + County + *Postcode* + *Country e.g.* Uhuru House, 1963,

> Independence Day Street, Jamhuri Corner,

intention of the Policy to secure the benefits of the latest technologies in digital mapping by embedding geo-codes into the NASK may be lost in implementation if the failure to include a geo-code in the format is interpreted as an exclusion of the geo-codes in official representations of an address Insert the changes highlighted in **bold font** below in paragraph 3.4:

For example, a parent address format provides for the *Address Number*, *Road Name or alphanumeric descriptor Ward* + *County* + *Postcode* **[+Geo-code]** e.g.;

1963, Independence Day Street, Nairobi Central, Nairobi, <u>PR5G+J4</u>

In cases where the road has not been named the address would read 1963, KE1212 - 63 **PRG6+4V** Nairobi Central, Nairobi (KE1212 – 63 being an automatically generated NASK Address and **PRG6+4V** being a geocode that identifies the location or position of one terminal of the road on earth based on the coordinates of longitude and latitude).

A Child address format: Property Name, Address Number + Road Name or alphanumeric descriptor + Locality + ward + County + Postcode + Country [+*Geo-code* e.g.

Uhuru House, 1963, Independence Day Street, *Jamhuri* Corner, *Utawala*, Nairobi, 147137, Kenya, <u>X9M3+8G</u>



	Utawala, Nairobi, 147137, Kenya	
The significance of a development of an addressing system that is geo-coded" (para. 1.1) and that "the use of smart phones and web mapping technologies have made in-roads in filling the gap that exists with the absence of an authoritative national addressing framework" by positioning geo- codes as solution to the redundancy of the current Post- Codes	Paragraph 3.4.2: Review of Post Codes The current post-codes are outdated and therefore will need to be reviewed so that they can be integrated into the National Addressing System. This will ensure conformity to international standards, operational interoperability, and alignment with regional and global requirements.	Indeed, a big part of the reason for the rising obsolescence of Post Codes as they exist in their current form is that users now rely more on internet-enabled technologies to receive communications and to be located for the purpose of delivering and receiving packages. Insert the amendments highlighted in bold below: Paragraph 3.4.2: Review of Post Codes The current post-codes are outdated and therefore will need to be reviewed so that they can be integrated into the National Addressing System. It is recommended that consideration be made of the possibility of replacing or improving post-codes as they exist currently with a standardised system of geo-codes. This will ensure conformity to international standards, operational interoperability, the use of technological innovations in digital mapping systems, and alignment with regional and global requirements.
The Council does not include the civil society and the private sector	Paragraph 4.2: The National Addressing Council Composition/Membership of the Council a. the Cabinet Secretary in the Ministry for the time being responsible for addressing who shall be the chairperson of the Council;	In the interests of inclusivity and bringing on board a diversity of ideas and solutions there is need to involve the private sector and civil society. Therefore Amcham recommends: i. One person representing an association or other entity for the time being recognized by law or the custom as representing the interests of civil society organizations. ii. One person representing an association or entity for the time being recognized by law or custom as representing the



b. the Chairperson of the Council of Governors who shall be the Co-Chairperson;	interests of the private sector and the business community.
c. the Cabinet Secretary in the Ministry for the time being responsible for Lands;	
d. the Cabinet Secretary in the Ministry for the time being responsible for the National Treasury;	
e. the Cabinet Secretary in the Ministry for the time being responsible for Transport;	
f. the Cabinet Secretary in the Ministry for the time being responsible for Security;	
g. the Attorney General; and	
h. the Registrar who shall be the secretary to the Council and an ex-officio member of the Council.	



NATIONAL ADDRESSING BILL 2021			
Issues/Provision in	Provisions in	Recommendations/Comments	
the Bill	National		
	Addressing Bill		
	2021		
Deployment of a digitalised addressing system will leapfrog national addressing from a naming and numbering exercise to a geo-map addressing system that will serve as an active asset with serviceable applications" and "further recommends a National Addressing System of Kenya (NASK) that will be geo-coded to ensure that addresses are matched with geographic	Section 2: Definition of Address Data" address data" means any data required by the national addressing system including land parcels boundary, parcel numbers, registration sections, registration dates, rotirement dates, road centre- lines, road classes, road identification, road names, county boundaries, national boundary, ward	There is a risk that by not mentioning or including geo-codes, the intention of the Policy may be lost in translation and implementation. In this regard, Amcham recommends that the para reads as: Definition of Address Data "address data" means any data required by the national addressing system including land parcels boundary, parcel numbers, registration sections, registration dates, retirement dates, road centre-lines, road classes, road identification, road names, county boundaries, national boundary, ward boundaries, building units, building complexes, street names, geographical names,	
coordinates on a map.", the Bill does not make any reference to geo- codes. The membership of the	boundaries, constituency boundaries, buildings, building units, building complexes, street names, geographical names and aerial imagery The Membership of	geo-codes and aerial imagery	
Council does not include the civil society and the private sector	the National Addressing Council Section 6(1): Establishment of the National Addressing Council	board a diversity of ideas and solutions there is need to involve the private sector and civil society. Therefore Amcham recommends:i. One person representing an association or other entity for the time being recognised by	



KEN	Y A
There is established a	law or the custom as representing the interests
National Addressing	of civil society organizations.
Council consisting	
of-	ii. One person representing an association or
(a) the Cabinet	entity for the time being recognised by law or
Secretary in the	custom as representing the interests of the
Ministry for the time	private sector and the business community.
being responsible for	
addressing who shall	
be the chairperson of	
the Council;	
(b) the Chairperson of	
the Council of	
Governors who shall	
be the Co-	
Chairperson;	
(c) the Cabinet	
Secretary in the	
Ministry for the time	
being responsible for	
Lands;	
(d) the Cabinet	
Secretary in the	
Ministry for the time	
being responsible for	
the National	
Treasury;	
(e) the Cabinet	
Secretary in the	
Ministry for the time	
being responsible for	
Transport;	
(f) the Cabinet	
Secretary in the	
Ministry for the time	
being responsible for	
Security;	
(g) the chairperson the	
National Land	
Commission;	



	(h) the Attorney General; and (i) the Registrar who shall be the secretary to the Council and an ex-officio member of the Council.	
Input into the National Addressing System	 17. (1) Every holder of address data shall input into the National Addressing System all address data held by it in the prescribed form under the Act. 	AmCham sees an opportunity to cooperate and be involved with the Committee and the private sector in inputting key data/information that would help in location of businesses.
Addresses to be allocated.	18. All addresses shall be allocated in the manner prescribed by the Office of the Registrar pursuant to this Act.	Amcham would recommend the use of a digital addressing system. There are a wide range of Global Position System (GPS) that may be employed to easily help in the allocation of a precise and accurate position to every specific 5m by 5m grid. each landmark or property with a unique digital address. The idea is to divide the country into 5m by 5m square grid with each grid being assigned a unique digital address. With this platform every single landmark or property can be located on a mapping system such as google map. Such a systems that has been effectively implemented is the GhanaPostGPS ¹ . Such a system can easily be replicated and employed in the Kenyan National Addressing System.
Input into the	17. (1) Every holder of	There is need for development of standards in
Addressing	input into the	the interoperability of addresses but also the
System.	National	interpretation of addresses. It would therefore

¹ https://www.caeaccess.org/archives/volume7/number13/gah-2018-cae-652749.pdf



	Addressing System all	typically include specifications for one or
	address data held hu it	more of the following (ISO 19160 2010):
	in the prescribed form	hore of the following (100 19100 2010).
	in the prescribed jorni	• All address assignment scheme, i.e.
	unuer the Act.	now addresses are assigned in the
		physical world.
		• Terminology that is used to describe
		the addressing scheme and/or
		concepts in the conceptual model.
		• A conceptual model that describes
		addresses, i.e. the meaning of concepts
		and relationships between them. The
		conceptual model reflects the
		addressing scheme in the physical
		world.
		• Address-specific metadata provides
		information about the address data,
		such as the custodian, lifespan, status,
		etc. Metadata augments the
		conceptual model.
		• An encoding of the conceptual data
		model.
The membership of the	The Membership of	In the interests of inclusivity and bringing on
County Addressing	the County	board a diversity of ideas and solutions there
Committee does not	Addressing	is need to involve the private sector and civil
include the civil society	Committee	society. Therefore Amcham recommends:
and the private sector		
····· F	Section 19(1):	i. One person representing an association or
	Establishment of a	other entity for the time being recognised by
	County Addressing	law or the custom as representing the interests
	Committee	of civil society organizations.
	Each county	
	oovernment shall	ii One person representing an association or
	establish a County	entity for the time being recognised by law or
	Addressing Co-	custom as representing the interests of the
	ordination Committee	private sector and the business community
	comprisino –	private sector and the submess community.
	(a) a representative of	
	the county execution	
	committee member	
	reenoneible for	
	responsible jor	



nlanning zuho shall he	
the chairperson:	
(h) a representation of	
(b) a representative of	
the Cubinet Secretury	
responsible for	
information	
technology, who shall	
be the co-chairperson;	
(c) a representative of	
the county executive	
committee member	
responsible for	
finance;	
(d) a representative of	
the Cabinet Secretary	
responsible for	
survey; (e) a	
representative of the	
Cabinet Secretary	
responsible for	
interior; (f) a	
representative of the	
Cabinet Secretary	
responsible for lands;	
(g) a representative of	
the county executive	
committee member	
responsible for	
transport;	
(h) the county	
Attorney.	



ANNEXURE 1: EXPLANATION ON PLUS CODES

Plus codes are a free, open source digital addressing solution developed by Google. They are addresses for people or places that don't have one.

Instead of addresses with street names and numbers, Plus Codes are based on latitude and longitude, and displayed as numbers and letters.

• They are much shorter than traditional global coordinates, so they're easy to use and share.

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- They exist for any location, even for places where there are no roads.
- Plus Codes can provide an accuracy of upto 0.9m x 0.5m for any given point on Earth
- They work on Google Maps (consumer & enterprise) & Search

How are they created?

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Plus Codes are created using latitude and longitude coordinates. These are converted from two long and complicated numbers into a single, shorter code.	53.339688, -6.236688 8QQ7+V8
Plus Codes can be visualised using a grid. Each level in the grid corresponds to a pair of characters in a Plus Code. This grid can be used to build a Plus Code for a place or use it to get to a destination.	
The initial top level grid lines are spaced at 20° intervals along longitude and latitude. Each row and column is then sequentially labelled with one of the 20 Plus Code alphanumeric characters allowing every cell to be easily referenced (for example, 9C).	



Zooming into an individual cell, the cell is further divided into a 20x20 grid with each column and row being sequentially labelled with one of the 20 Plus Code alphanumeric characters. This process is then repeated allowing for a zoomed in Plus Code to be created. In our example, the cell reference 9C5M8QQ7+V8R is the Plus Code for that cell.



Use Cases

Plus Codes have been used as an addressing solution in multiple markets:

- Kolkata, India: Plus Codes used to solve the addressing problem for millions of people in crowded and underserved urban areas.
- Mogadishu, Somalia: Plus Codes enabled healthcare workers to identify and vaccinate thousands of immunization-defaulted children
- Navajo Nation, Utah, US: Plus Codes were used to resolve multiple challenges in the community including emergency services and ensuring voters were in the right precincts
- São Paulo, Brazil: Plus Codes are being used to provide addresses to rural areas, incorporating the technology into the government's system and delivering address boards to rural citizens
- The Gambia: Plus Codes are providing addresses to the entire country of Gambia

Example of address boards used in different countries

