UNITED NATIONS DEVELOPMENT PROGRAMME

PROJECT DOCUMENT
UNDP Uganda

Project Title: Pulse Lab Kampala
Project Number:
Implementing Partner: DIM
Start Date: 01 July 2016   **End Date:** 01 July 2020   **PAC Meeting date:**   25 May 2016

Brief Description
At the invitation of the Government, Pulse Lab Kampala, the third Lab of the UN Global Pulse network (http://www.unglobalpulse.org/about-new), officially opened its doors in January 2015. The Lab is a UN inter-agency initiative under the leadership of the UN Resident Coordinator to support the Delivering as One UN Process. Pulse Lab Kampala will build the capacity of, and work closely with the Government of Uganda to achieve the following outputs: 1. Ecosystem catalysed by Pulse Lab Kampala to develop innovations with big data and real-time analytics to achieve and monitor SDGs localization In partnership with the Government, Pulse Lab Kampala will contribute to the development of regulatory frameworks and technical standards to address data sharing and privacy protection challenges. The Lab will engage key stakeholders to prioritize an innovation agenda and will provide public sector organisations with policy guidance and technical assistance to strengthen their capacity for integrating real-time insights into operations. 2. Project and tools developed by Pulse Lab Kampala and partners are used to monitor and achieve SDG localization In collaboration with UN entities and national institutions, Pulse Lab Kampala will identify development and humanitarian challenges that could be addressed through analysis of new digital data sources. The Lab will conduct applied research projects to test new real-time monitoring approaches and prototypes of open source technology tools to address the identified challenges. Pulse Lab Kampala will partner with several Government counterparts, including the Uganda Bureau of Statistics, Ministry of Health, National Planning Authority (NPA), Office of the Prime Minister (OPM), National Water and Sewerage Corporation (NWSC), Kampala Capital City Authority (KCCA), Ministry of Gender, Labor and Social Development (MGLSD), National Information Technology Authority (NITA and Uganda Communications Commission (UCC).

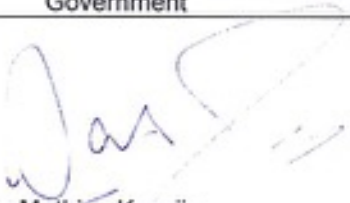| Contributing Outcome (UNDAF/CPD, RPD or GPD):		
1.1 Rule of Law and Constitutional Democracy; 1.2 Human Rights and Gender Equality; 1.3. Institutional Development, Transparency and Accountability; Outcome 1.4. Peace, Security and Resilience; 2.1. Learning and Skills Development; 2.2. Health; 2.3. Social Protection; 2.4. Addressing GBV and Violence Against Children (VAC); 2.5. HIV & AIDS Response; Outcome 3.1. Natural Resource Management and Climate Change Resilience; Outcome 3.2. Infrastructure, Production & Trade and 3.3 Employment	**Total resources required:**	USD 4,400,000
	Total resources allocated:	USD 1,020,000
	Bill & Melinda Gates Foundation	100,000
Indicative Output(s):	Government of The Netherlands (UN Global Pulse fund)	200,000
Output 1. Ecosystem catalysed by Pulse Lab Kampala to develop innovations with big data and real-time analytics to achieve and monitor SDGs localization	Government of Sweden	300,000
	UN Programme on AIDS	50,000
Output 2. Project and tools developed by Pulse Lab Kampala and partners to monitor and achieve SDG localization.	Government of Belgium	370,000
	Unfunded:	USD 3,380,000

Agreed by (signatures)[1]:

Government	UNDP
Print Name: Hon. Mathias Kasaija Minister for Finance, Planning and Economic Development,	Print Name: Ms. Rosa Malango, UN Resident Coordinator & UNDP Resident Representative
Date: 25th July 2016.	Date: 12th April 2016

Empowered lives
Resilient nations

---

[1] Note: Adjust signatures as needed

I.   DEVELOPMENT CHALLENGE

Uganda

Uganda aspires to become a competitive upper-middle-income country by 2040[2]. The national development plan, 2016-2020, has prioritized investments in agriculture, tourism, minerals, infrastructure and human capital development sectors, with governance as its backbone[3]. The plan is aligned to the sustainable development goals and takes into account the 6.4 per cent growth of Uganda over two decades and its reduction of poverty from 54 per cent in 1992 to 19.7 per cent in 2013[4]. Uganda has transitioned from a post-war, one-party state to an evolving multi-party democratic state, ranking 19th of 52 African countries in terms of good governance[5]. Northern Uganda, stabilized through the peace, recovery and development plans, is slowly reintegrating into the national economy. Uganda has shifted from poverty reduction strategies to an economic growth and transformation agenda. Anchored in 'Agenda 2063' of the African Union, progress has been achieved in East African regional integration such as in the sectoral policies harmonization, infrastructural development and common market systems. These, coupled with new prospects for the extractives industry, put Uganda in a unique position to accelerate its development trajectory.

Development progress in Uganda faces five key challenges:

a. Evolving democracy is characterized by institutional capacity gaps, inadequate citizen participation in governance processes[6], as well as gender inequality in economic and political arenas[7].

b. Corruption, limited national resources envelope and low technological development impacts service delivery. It is estimated that annually $250-300 million dollars[8] of public resources are lost through corruption. The national anti-corruption framework is beset with weak asset recovery systems, weak coordination amongst anti-corruption agencies and limited capacity in the legislative and accountability and public sector management institutions.

c. Instability in neighbouring countries has reduced cross-border trade and increasingly creates a security burden.

d. Inequitable distribution of growth dividends is compounded by a population growth of 3 per cent with more than 50 per cent of the population under 18 years. Although poverty has declined, 43 per cent of the population could regress into poverty during shocks[9]. Disparity is highest in the north (44 per cent) and east (24.5 per cent), compared to the country average (19.7 per cent)[10]. Poverty is 14 points higher in rural than in urban areas. Inequality results from unequal access to, and control of, productive assets by women and youth[11]; inefficient and unresponsive markets; inefficiencies in national resource allocations and budget executions; and fiduciary malpractice.

e. The degradation of natural resources increases vulnerability to climate change and natural hazards. From 1994 to 2008, forest areas declined from 25 per cent to 15 per cent and wetland cover from 15.6 to 10.9 per cent [12] due to low capacity to enforce regulatory frameworks; unsustainable production and consumption systems and limited alternative livelihoods opportunities. The convergence of high biodiversity and exploitable oil in the Albertine Graben poses challenges for environmental sustainability, tourism and stability. Uganda experienced 2,500 disasters in the last decade, and in 2010-2013[14] rainfall variability cost the country $1.2 billion.

---

2 Vision 2040

3 Second national development plan, 2016-2020, June 2015

4 National household surveys, 1992-1993 and 2012-2013

5 Ibrahim index, 2014

6 Second national development plan

7 Global gender gap report 2014

8 Analytical study on democratic governance in Uganda in support to the formulation of NDP 2015/16-2018/19, November 2014 by J.M. Aliro Omara & Christine Birabwa Nsubuga

9 Poverty status report, 2014

10 Estimates based on comparisons of consumption expenditure per adult equivalent with the official

11 75 per cent of the people are under 31 years of age (2014 census)

12 National State of the Environment Report, 2012

13 Uganda integrated rainfall variability impacts, needs assessment and drought risk management strategy, 2010-2011

The Post 2015 Agenda and data needs

In its 2013 outcome document entitled '*The Future We Want,*' the Secretary-General's High-Level Panel of Eminent Persons on the Post-2015 Development Agenda called for a '*data revolution*' to improve accountability and decision-making, and to meet the challenges of measuring sustainable development. Momentum around data and its relevance to the development agenda has grown steadily over the past two years.

In September 2015, Member States of the UN reached an historic agreement to adopt 17 goals for a development agenda to succeed the Millennium Development Goals (MDGs). The new goals are global in nature, universally applicable, and address the three dimensions of sustainable development: the economic, the social and the environmental. The Sustainable Development Goals (SDGs), or Global Goals, also recognize that new and innovative tools are necessary to complement traditional policy-making methodologies for this transformative agenda.

Globally, the centrality of data and information in facilitating sustainable development is now recognised as a key tenet in achieving progress in the post 2015 agenda. The Addis Ababa Action Agenda (UN document A/CONF.227/L.1) recently adopted at the Third International Conference on Financing for Development (FFD3) captures in its action areas the priorities and commitments agreed by member states, key among them being the centrality of data in monitoring and follow-up *(Paragraphs 125-133)*. This section of the outcome document outlines the meaning, principles of monitoring and measuring progress and effectiveness, including transparency – ensuring that stakeholders are held to account for their commitments.

The availability and use of high quality data is essential to measuring and achieving the Global Goals. By harnessing the power of technology, mobilising new and open data sources, and partnering across sectors, the goals can be achieved faster and their progress can be more transparent. Utilising the data revolution is a critical enabler of the Global Goals—not only to monitor progress, but also to inclusively engage stakeholders at all levels – local, regional, national, global—to advance evidence-based policies and programs to reach those who need it most.

Data can show us where girls are at greatest risk of violence so we can better prevent it; where forests are being destroyed in real-time so we can protect them; and where HIV/AIDS is enduring so we can focus our efforts and prevent new infections. Data can catalyse private sector investment; build modern and inclusive economies; and support transparent and effective investment of resources for social good.

New data and new data collection and monitoring technologies are becoming rapidly available. Big Data – the deluge of new forms of data from mobile phone records, satellite imagery, social media, call logs, online transactions, and so on – has great potential to fill data gaps. It is widely accepted that new and non-traditional sources of information have a transformative power and will play a critical role in supporting the production of more detailed and timely data to monitor progress on the goals and targets of the Post-2015 development agenda.

Challenges for the use of Big Data and data innovation

1. **Data Access.** Humanitarian agencies have limited experience negotiating data-sharing partnerships with private sector entities. Where such agreements exist, neither the data nor the analyses are easy to share. While some big data sources are publicly accessible on the open web, such as social media and satellite imagery, some of the most relevant data sources are held by corporations in industries that include telecommunications, financial services, food, energy and transport. Although more of this data is being opened for research purposes, much remains to be done to create the conditions for sustainable access to and use of big data by humanitarian organizations, including formulating incentives and industry-specific data privacy and data protection standards along with appropriate management and legal instruments for data sharing in ways that minimize business risk.

2. **Data Privacy & Protection:** Legitimate and growing concerns about data privacy and a fragmented regulatory landscape adds complexity to the development of standardized, scalable approaches to data access and management of privacy risks. A coordinated approach is required to ensure the emergence of frameworks for safe and responsible use of big data for humanitarian action, including development of sustainable data anonymization standards to minimize threats to privacy, confidentiality, data integrity and approaches that make it possible to assess relevant risks, harms

and benefits. The latter needs to be considered through the prism of proportionate, necessary and justified purpose principle, while taking into consideration the risks of not using big data.

3. **Analytic Capacity.** The volume, velocity, and heterogeneity of data are all increasing exponentially. Humanitarian agencies, government emergency response institutions and NGOs often lack the requisite technical capacity to work with big data, data analytics technologies and data science techniques. They may encounter challenges integrating real-time insights from big data into existing decision-making processes developed around more traditional data sources collected at lower frequency.

4. **Integration with Program Design.** Delays involved with data collection do not often allow for tight integration with initial interventions. Data also tend to be in poor format before an event, leading to delays and errors in fusing data and integrating systems.

5. **Scalable Precedents.** There is a lack of models where data and big data have been used appropriately. Frameworks with clear practices to integrate into field operations are required. The majority of projects exploring the utility of big data for humanitarian action have been retrospective academic studies rather than solutions for real users in ongoing operations. The resulting lack of evidence of impact perpetuates stasis around efforts to increase data sharing, development of technology solutions, or resource mobilization, all of which, in turn, decrease the likelihood of proven methodologies being implemented in the field.

6. **Community of Practice:** The community of practice around humanitarian applications of big data is still embryonic. There is still no common agenda for priority innovation opportunities, nor any shared forum, where big data researchers, humanitarian practitioners, potential solution providers, and donors regularly interact.

II. STRATEGY

Theory of Change
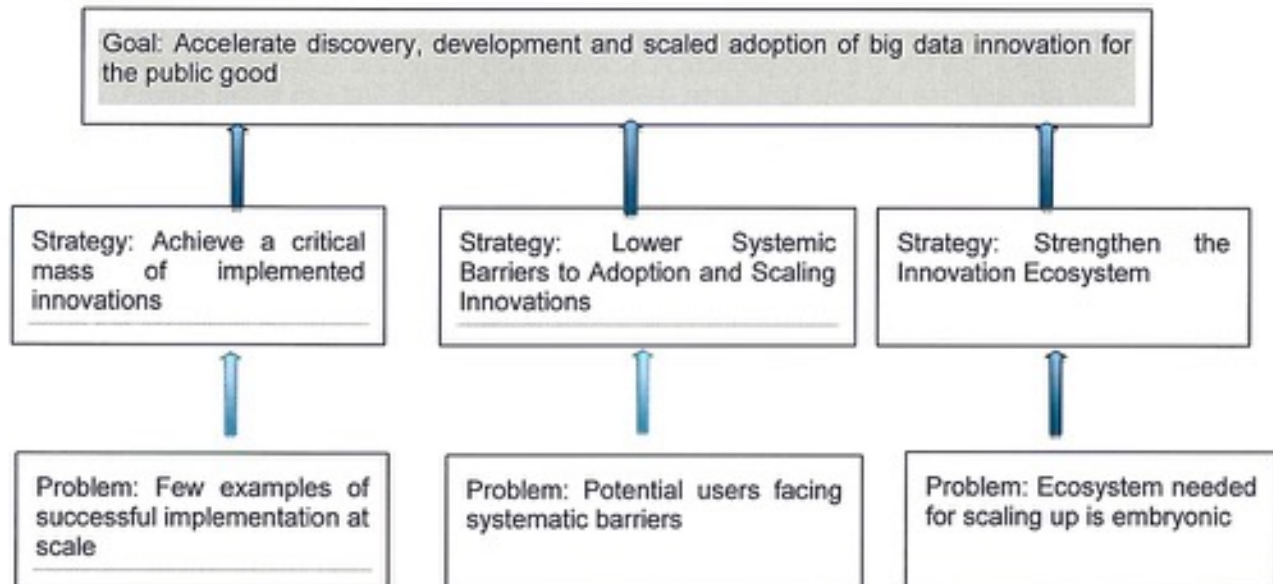
There are few examples on successful implementation of Big Data and data innovation projects to achieve and monitor the Global Goals. There are several reasons for it: a. Little data (Big Data) has being shared by owners (private sector); b. Few technology solutions available; c. Limited uptake by humanitarian and development organizations and d. Low public sector investment.

Large-scale investment in, and adoption of, innovation in big data for the public good will continue to lag until there is sufficient evidence of the viability of the approach to convince skeptics. What is needed to overcome this challenge is a critical mass of end-to-end implementation successes, each demonstrating a clear business case, evidence of implementation feasibility, measurable impact, scalability, and relevance to

practitioners' needs. These case studies, together with new knowledge in the fields of data science and humanitarian design, new partnership models, and technology tools will drive rapid increases in both supply and demand for big data innovation for the public good.

Potential users of Big Data and data innovation to achieve and monitor the Global Goals face the following systemic barriers: a. No data standards or best practices for sharing big data b. Few standards for anonymization of big data and c. Regulatory environment does not adequately support balancing risk of misuse of data against risk of not using it for public good.

Project-specific examples are needed to demonstrate paths to overcoming barriers and support development and adoption of standards for anonymization of big data, shared value frameworks for sustainable public-private data sharing, and trust frameworks for safe and responsible use of big data as a public good. These examples may then be leveraged as a basis for development of global policy frameworks for overcoming the systemic barriers holding back broader adoption.

The current ecosystem needed for scaling up successful pilots using Big Data and data innovation is still embryonic due to the following reasons: a. Limited institutional capacity to integrate big data into operations; b. Data scientists and big data technologists aren't talking to development or humanitarian practitioners; c. Little cross-sectoral visibility of current activities and d. No common global agenda for big data innovation.

Public engagement is needed to convene disparate stakeholders around a common innovation agenda, together with investments in organizational capacity and stronger linkages across networks. Improved coordination between researchers, solution providers, practitioners, and funders will drive more efficient innovation work that will in turn accelerate adoption.

Pulse Lab Kampala, a Lab in the UN Global Pulse network

At the invitation of the Government of Uganda and because of the Country's reputation as an "early adopter" of innovations, Global Pulse opened its first innovation hub in East Africa in Uganda. Global Pulse has been the UN's data innovation initiative since its establishment by Secretary-General Ban Ki-moon in 2009. The initiative functions as a network of innovation labs where projects on big data and data innovation are conceived and coordinated. The backbone of the Global Pulse initiative is its network of country-level Pulse Labs, which employ a build-to-learn approach. Pulse Labs are physical centres of innovation and R&D that bring together government, the UN and local partners in academia and the private sector to test, refine and scale solutions that use real-time big data to support development goals. The first Lab in the network was opened in New York in 2010 and the second was opened in Jakarta in 2012.

Crucial to the success of Pulse Labs is having government and local expertise involved in their creation and management. Pulse Lab Kampala, the third Lab of the Global Pulse network (http://www.unglobalpulse.org/about-new) was officially launched by the Rt. Hon. Prime Minister Dr. Ruhakana Rugunda in January 2015. The lab is set up under the UN Resident Coordinator's Office (RCO) and the UNCT, both will build on this innovation for the UNDAF period. The project document has been designed based on the work done to establish Pulse Lab Kampala. Since the Lab was officially launched in 2015, several pilots have been developed with partners in Government, Academia, private sector and development actors. Pulse Lab Kampala has successfully proved that it is possible to tap into new digital data sources to achieve and monitor the SDGs. The 4-year project will allow scaling up of successful pilots initiated with Government counterparts building national capacities.

The Government of Uganda, with the support of the UN has positioned itself as leader in innovation and use of new technologies for improving national engagement and public service delivery. Under the UNDAF 2015 – 2019, the Government and the UN will leverage its access to global technology and innovation for development purposes to inform national development policy and responses. Uganda's young population, combined with the growth of mobile telephony provides an ideal test case for the application of such technologies.

The new development agenda provides a framework for Pulse Lab Kampala's objectives in supporting UN partners towards the delivery of results in Uganda. Utilizing the data revolution is a critical enabler of the Global Goals, not only to monitor progress but also to inclusively engage stakeholders at all levels to advance evidence-based policies and programmes and to reach the most vulnerable.

To achieve its strategic objectives, UN Global Pulse follows an operational strategy based on two tracks:

TRACK 1: INNOVATION DRIVER

Global Pulse's innovation programmes across a network of Pulse Labs provide the UN system and its partners with access to the data, tools and expertise required to discover high-potential applications of big data, develop innovative open source applications and platforms to improve decision making, and support pilot-based evaluation of promising solutions.

TRACK 2: ECOSYSTEM CATALYST

Global Pulse contributes to the development of regulatory frameworks and technical standards to address data sharing and privacy protection challenges, engages key stakeholders within the emerging community of practice on a priority innovation agenda, and provides public sector organizations with policy guidance and technical assistance to strengthen their capacity for integrating real-time insights into operations.

In addition, Global Pulse's strategy rests upon two enabling activities: (a) strategic partnerships (b) privacy and data protection.

CROSS - CUTTING ENABLER: PARTNERSHIPS

Global Pulse's advocacy agenda is focused on raising awareness of big data as a public good in order to attract potential partners from the private sector, the public sector and sectoral practitioners. The project's status as a special initiative of the UN Secretary-General's office makes it an appealing broker for data innovation partnerships with private sector, and a neutral advisor and technical partner for UN Agencies.

A network of strategic partners, at both the global and country-level, is required to ensure sustainable access to the resources required for joint innovation in Pulse Labs and to create the enabling environment needed for the success of accelerating big data innovation and ecosystem building. Partners collaborate with Pulse Labs through:

- Data: Sharing data sets or providing access to streaming data to support Pulse Labs' toolkit development efforts and field missions.
- Technology: Sharing tools for data mining, real-time analytics and data visualization, or sharing storage and computing capabilities
- Expertise: Making engineers, data scientists or researchers available to collaborate on specific projects that support the UN, public sector, and other humanitarian organizations.

CROSS – CUTTING ENABLER: DATA PRIVACY & DATA PROTECTION

In addition to being the explicit focus of one of Global Pulse's innovation programmes and a key area of its global advocacy efforts, privacy protection is integrated across all of the initiative's operations. Global Pulse must anticipate the privacy risks around the use, reuse and potential misuse of data. In order to do so, Global Pulse follows a "privacy by design" process that ensures each new technological development or innovation is evaluated against the risks it poses for the privacy of individuals.

More detailed information About UN Global Pulse / Pulse Lab Kampala Privacy Policy is included in annex 2.

III.   RESULTS AND PARTNERSHIPS

Results

Ecosystem catalysed by Pulse Lab Kampala to develop innovations with big data and real-time analytics to achieve and monitor SDGs localization

In partnership with the Government, Pulse Lab Kampala will contribute to the development of regulatory frameworks and technical standards to address data sharing and privacy protection challenges. The Lab will

engage key stakeholders to prioritize an innovation agenda and will provide public sector organisations with policy guidance and technical assistance to strengthen their capacity for integrating real-time insights into operations.

Project and tools developed by Pulse Lab Kampala and partners are used to monitor and achieve SDG localization

In collaboration with UN entities and national institutions, Pulse Lab Kampala will identify development and humanitarian challenges that could be addressed through analysis of new digital data sources. The Lab will conduct applied research projects to test new real-time monitoring approaches and prototypes of open source technology tools to address the identified challenges. The projects and tools facilitated by Pulse Lab Kampala will support development programmes and humanitarian action with:

- Enhanced Early Warning. Detection of anomalous trends and patterns of events to enable early warning of emerging crises and earlier responses to prevent long-term harm.
- Real-Time Awareness. An up-to-date picture of trends, hotspots and dynamic changes in population behaviour to enhance programme planning, monitoring and implementation.
- Rapid Impact Monitoring and Evaluation. Timely feedback on the impact of programmes and policies to facilitate acceleration and correctional measures.

Resources required to achieve the expected results

The UN Global Pulse is committed to fund the operations of Pulse Lab Kampala until core funding has been mobilized for the life of the project. The UN Global Pulse network mobilises funds for the 3 Labs via Pulse Lab New York.

Local resource mobilization efforts from Kampala have resulted in donor contributions pledged to-date by the Government of Belgium, the Government of Sweden, the Government of The Netherlands, the Bill and Melinda Gates Foundation and the UN Programme on AIDS. Funding for projects activities in Year 1 is available from these donors.

Donor contributions already disbursed to the Lab in New York will be used to support the operations at Pulse Lab Kampala in Years 2, 3 and 4 to cover funding gaps while resources are mobilized for the project.

Resources will be mobilized locally and internationally. Locally the Lab will engage with Embassies and Bilateral Cooperation Agencies to channel funds for the project. Presentations to all staff in Embassies and brainstorming sessions with programme staff will be conducted to generate interest in the project. This was the way in which contributions from the Danish and Swedish Embassies were channelled to initiate activities at the Lab last year. The Lab will also engage with UN Agencies, civil society organization and Government counterparts to promote cost-sharing for innovation initiatives. A contribution from UNDP Zimbabwe was channelled in this way to support the initial activities of the Lab. Funds will also be mobilised internationally with the support of Pulse Lab New York. Meetings with donors will be pursued to explore funding opportunities. Presentations of the Lab's work in global and regional forums will be pursued to increase visibility and mobilize funding.

The project will be funded through voluntary contributions from UN Member States, UN Agencies, Governments, foundations and the private sector. In addition to these financial contributions, the Lab will mobilise significant in-kind contributions and pro-bono services from partners in the UN system, Academia and private sector.

The project will benefit from data science expertise from academia. The Lab will partner with Universities including University of Makerere in Uganda, Stellenbosch University in South Africa and Sheffield and Edinburg Universities in the United Kingdom, among others, for project implementation. Doctoral students from Universities will be hosted at the Lab as "research partners" to advance research in the "Big Data for Development" field. Research teams at the Universities will provide in-kind contributions to the Lab conducting research to support the Lab's projects.

In-kind support from the private sector will be channeled for project implementation. The contributions will be received as technology toolkits and hours of labour from volunteer software developers and data scientists.

Partnerships

The Lab will work, among others, with Government counterparts:

- o   Ministry of Health – to support the response to disease outbreaks;
- o   National Planning Authority (NPA) – to explore the use of Big Data to monitor the National Development Plan II;
- o   Office of the Prime Minister (OPM) – to support assessing quality of delivery of public services with a focus on education, healthcare and infrastructure;
- o   National Water and Sewerage Corporation (NWSC) – to explore the use of Big Data analytics to inform strategic direction of the public utility;
- o   Kampala Capital City Authority (KCCA) – to explore the use of Big Data for disaster risk management;
- o   Ministry of Gender, Labor and Social Development (MGLSD) – to explore the use of Big Data analytics to prevent gender-based violence;
- o   National Information Technology Authority (NITA) - to lower barriers for the adoption of Big Data and new technologies to achieve the Global Goals;
- o   Uganda Communications Commission (UCC) – to catalyse communication technology to achieve the National Development plans ensuring privacy and data protection.

Uganda Bureau of Statistics (UBOS) will be a main partner to explore the use of Big Data, digital data sources and Big Data analytics to strengthen official statistics. Pulse Lab Kampala and UBOS will partner to explore the use of data innovation, Big Data and innovative technology to achieve and monitor the advancement of the Global Goals. UBOS and the Lab will collaborate to ensure that Ministries, Departments and Agencies (MDAs) will tap into the innovations generated with different initiatives under the project. UBOS will serve as technical advisor to ensure that the projects initiated by the Lab and partners build into ongoing systems on use by the Government of Uganda, ensuring ownership and sustainability of the project results. UBOS will also support the cross-fertilization of projects conducted with different partners ensuring knowledge sharing and capacity building across MDAs.

Pulse Lab Kampala will partner with UBOS to use Big Data in the production of official statistics to address the urgent needs for support of SDG indicators. Pulse Lab Kampala will collaborate with UBOS following the recommendations of the third Global Conference on Big Data for Official Statistics15 organized by the UN Statistics Division. The recommendations are: (1) providing guidance for access to proprietary data and for successful partnerships with data owners, by (2) building capacities on topics such as methodology, IT tools and project management related to Big Data, and (3) supporting projects, which demonstrate the use of Big Data for official statistics, and especially for the compilation of SDG indicators.

Pulse Lab Kampala will work very closely with academia, including Makerere University of Uganda, Stellenbosch University of South Africa, University of Sheffield, University of Edinburg and Dedan Kimathi University in Kenya among others.

The Lab intends to become a hub for youth talent in the region where young researches from Africa are invited to collaborate on worldwide innovations. Pulse Lab Kampala will support various projects initiated by young researchers in Makerere University.

Pulse Lab Kampala will work closely with UN Agencies including UNDP, UNAIDS, WFP, UNICEF, WHO, UNDOC among others. Pulse Lab Kampala is will collaborate with other international organizations, including the World Economic Forum, the World Bank and the International Telecommunications Union (ITU), on strategies for providing incentives for specific industries (e.g. mobile, financial services and pharmaceutical) to contribute to a Big Data commons.

Pulse Lab Kampala will work closely with civil society organizations (CSOs). The Lab will test new data innovations partnering with CSOs to support the following areas of work: a) monitoring of the evolving context of programmes in real time and b) monitoring and evaluation of programme implementation. CSOs will be mobilized to define data privacy and protection protocols and frameworks for the use of Big Data.

---

15 http://unstats.un.org/unsd/bigdata/

Pulse Lab Kampala will offer the private sector opportunities to become partners in the sustainable development agenda. At the global level Global Pulse has already consolidated strong partnerships with the Private sector whose technologies, expertise and data can be harnessed to support policy makers. Pulse Lab Kampala will reproduce these partnerships at the regional and local levels. Data-sharing partnerships will play a critical role in supporting Pulse Lab Kampala's long-term agenda of contributing to the establishment of a public/private big data commons to facilitate sustainable access to global real-time information on human well-being.

Risks and Assumptions

Risk - New legal formats to formalize partnerships with the private sector are not approved by Legal Units

The term *Data Philanthropy* describes a new form of Corporate Social Responsibility (CSR) in which private sector companies make privately-held data available to third parties to be used for positive social impact. Pulse Lab's Kampala advocacy and engagement with the private sector encompasses the short-term goal of persuading companies to find ways to safely share their data to support joint innovation and research. In structuring new partner agreements, Pulse Lab Kampala will seek to establish open innovation protocols, whereby the partner agrees from the outset to not only share relatively sensitive data with Pulse Lab Kampala, but also make other less-sensitive data available to interested third-party researchers working with the Lab.

The lack of availability of legal agreements to facilitate data sharing between the UN and private sector companies can affect the achievement of results. UN Global Pulse has promoted new types of legal agreements with private sector for data sharing. Pulse Lab Kampala will maintain a fluent dialogue between legal units and legal departments of private sector companies and legal departments at the UN to promote and facilitate new type of legal agreements.

Risk - Legal frameworks in Uganda are developed to prevent the use of telecoms data and other types of Big Data to achieve and monitor SDGs

Some governments have adopted legal frameworks that prevent the use of Big Data for the public good to reduce the risk of misuse and to protect privacy. Pulse Lab Kampala will work with a network of experts and collaborators to develop models for, the safe and responsible use of Big Data. The Lab will build the Government's capacity to promote standards and frameworks for effective governance of the use of big data for the public good.

Risk - Privacy of the subjects of analysis is not protected

Together with an international data privacy advisory group, Global Pulse has developed a thorough framework for privacy assessment called the Privacy Impact Assessment (PIA) tool. The framework makes sure projects navigate risks and prevent potential misuse of data that can have a negative effect on the privacy of individuals and communities. The Lab will use the PIA tool and will also apply systematically UN Global Pulse Privacy & Data Protection Principles to all projects (http://www.unglobalpulse.org/privacy-and-data-protection). Annex 2 includes more information about UN Global Pulse Privacy Policy.

Stakeholder Engagement

A network of strategic partners, at both the global and country-level, is required to ensure sustainable access to the resources required for joint innovation at Pulse Lab Kampala and to create the enabling environment needed for the success of accelerating big data innovation and ecosystem building. Partners will collaborate with Pulse Lab Kampala through:

- o *Data philanthropy*: Sharing data sets or providing access to streaming data to support Pulse Labs' toolkit development efforts and field missions;
- o *Technology*: Sharing tools for data mining, real-time analytics and data visualization, or sharing storage and computing capabilities;

- o *Expertise:* Making engineers, data scientists or researchers available to collaborate on specific projects that support the UN, public sector, and other humanitarian organizations.
- o *Sponsorship:* Providing funding to support the Lab's ongoing efforts to transform Big Data into a public good.

The Lab will employ three engagement models for working with UN Agencies, Government counterparts, Academia, private sector, civil society organizations and other development partners:

- o Executor: The Lab will conduct analytics and data analysis in-house, leveraging its extensive partner network. Agency or Government partners contribute with resources and subject expertise;
- o Facilitator: The Lab will focus on project facilitation, building a bridge between private sector data analytics capacity and UN or Government partners;
- o Technical Advisor: The Lab will provide guidance or specific expertise on technical topics, such as privacy regulation or data access standards and policies.

South - South and Triangular Cooperation (SSC/TrC)

The joint innovations projects that will be facilitated by Pulse Lab Kampala will provide opportunities for the private sector, UN agencies, government institutions and academia to jointly drive worldwide innovations. Opportunities will be sought with the project to share these innovations through specific South - South and Triangular Cooperation events. Knowledge sharing and findings will be promoted through bilateral exchanges between Uganda and countries in the region. Triangular cooperation will be promoted at International conferences and forums.

Knowledge

The knowledge and lessons learned generated by the project will be published in the following formats and platforms:

- o Project page in Global Pulse website: A dedicated project site will be created to disseminate the project at Pulse Lab Kampala / Global Pulse website. Here is a sample: http://www.unglobalpulse.org/radio-mining-uganda
- o Project brief: A standard 2-page brief in PDF format will be produced and publish at Pulse Lab Kampala/ Global Pulse website. The project brief will be widely disseminated along with other project briefs in an annual Press Conference in UN HQ. Here is a sample: http://www.unglobalpulse.org/sites/default/files/UNGP_ProjectSeries_Outbreak_Response_Visualis ation_2015.pdf
- o Blogpost: A blogpost explaining the impact of the project will be publish at Pulse Lab Kampala/ Global Pulse website. Here is a sample: http://www.unglobalpulse.org/UNFPA-teenage-pregnancy-pilot
- o "Technical Report" or "Methods Paper": A technical paper explaining the methodology used in the analysis and a detailed description of the project / toolkit created will be widely disseminated. Here is a sample: http://www.unglobalpulse.org/projects/analysing-seasonal-mobility-patterns-using-mobile-phone-data
- o Social media posts: News on the project implementation and results will be shared via Pulse Lab Kampala / Global Pulse Tweeter account: https://twitter.com/PulseLabKampala?ref_src=twsrc%5Etfw
- o International technical conferences: Pulse Lab Kampala will be invited to present its work throughout the year to international conferences; the project will be highly disseminated at those conferences.
- o Presentations to partners: Pulse Lab Kampala will share knowledge and lessons learnt with the project with regular presentations to partners from the Government, UN Agencies, private sector, Academia and other stakeholders.

Sustainability and Scaling Up

Pulse Lab Kampala will not collect data with the project. The Lab will develop applications with partners to analyse data in innovative ways. Different types of data that are "owned" by different entities will be

specialist roles - including data scientists, data analysts, data engineers, partnerships managers, privacy and legal experts, development practitioners and policy liaisons.

To guide the work of Pulse Lab Kampala, an annual research agenda is set, with strategic priorities agreed with stakeholders. Current applied research projects address wide-ranging topics including: humanitarian logistics, poverty monitoring, governance, violence against women and health.

Pulse Lab Kampala works along with Pulse Lab Jakarta and Pulse Lab New York. The network provides a space for technologies and analysis techniques to be tried rapidly and iteratively, where teams can learn from each other, and from other labs and contribute knowledge to a larger ecosystem. By sharing their breakthroughs, the Pulse Labs help establish and mainstream global best practices of how new sources of digital data and emerging technologies may be used to help policy makers understand, in real time, what is happening to vulnerable populations.

V. RESULTS FRAMEWORK[16]

Intended Outcome as stated in the UNDAF/Country Programme Results and Resource Framework:

1.1 By end 2020, rule of law, separation of powers and constitutional democracy are entrenched in Uganda and all individuals are treated equally under the law and have equitable access to justice.

1.2 By end 2020, gender equality and human rights of all people in Uganda are promoted, protected and fulfilled.

1.3 By end 2020, targeted public institutions and public-private partnerships are fully functional at all levels, inclusive, resourced, performance-oriented, innovative and evidence-seeking supported by a strategic evaluation function; and with Uganda's citizenry enforcing a culture of mutual accountability, transparency and integrity.

1.4 By end 2020, Uganda enjoys sustainable peace and security, underpinned by resilient institutional systems that are effective and efficient in preventing and responding to natural and man-made disasters UNDP.

2.2 By end 2020, Ugandan population enjoys healthier and productive lives with substantial reductions in mortality and morbidity, especially among children, adolescents, pregnant women and other vulnerable groups; and sustained improvements in population dynamics.

2.3 By 2020, a nation with resilient communities and reduced extreme poverty and inequalities.

2.4 By end 2020, incidence and impact of GBV and VAC on women and children is substantially reduced, underpinned by a strong institutional, societal and response.

2.5 By end 2020, a multi-sectoral HIV & AIDS response that is gender and age-responsive, well-coordinated, effective, efficient and sustainably financed to reverse the current trend and reduce the socioeconomic impact of HIV and AIDS.

3.1 By end 2020, Natural resources management and energy access are gender responsive, effective and efficient, reducing emissions, negating the impact of climate-induced disasters and environmental degradation on livelihoods and production systems, and strengthening community resilience.

3.2 By end 2020, Uganda's stock of infrastructure adheres to physical planning policies and standards to support production and trade; production systems (agriculture, industry, mining & tourism) are internal & international market oriented, competitive, climate resilient, environmentally friendly, gender responsive, green technology driven and generating sustainable job opportunities for all, particularly women and youth; trade is formalized, competitive, scalable, ICT-enabled, regionally integrated, promoting MSMEs.

3.3 By end 2020, Uganda has an expanded and well-regulated labour market with safe and decent jobs benefiting all, particularly women, youth and other vulnerable groups.

---

[16] UNDP publishes its project information (indicators, baselines, targets and results) to meet the International Aid Transparency Initiative (IATI) standards. Make sure that indicators are S.M.A.R.T. (Specific, Measurable, Attainable, Relevant and Time-bound), provide accurate baselines and targets underpinned by reliable evidence and data, and avoid acronyms so that external audience clearly understand the results of the project.

Outcome indicators as stated in the UNDAF/Country Programme Results and Resources Framework, including baseline and targets:

Outcome 1.1 Indicator: % of women/men who think Uganda has democracy (or with minor problems), by sex. B: Total = 52 (M/F = 58/46) (Rural/Urban = 56/44) (2012). T = 60 (M/F= 60/60; Rural/Urban = 60/40)

Outcome 1.2 Indicator: % strongly agreeing that women should have equal rights and receive same treatment as men do, by sex. B: Total = 61 (M/F = 55/68). T = 80 (M/F = 80/80)

Outcome 1.3 Indicator: % of women/men who think Government is fighting corruption very well. B: Total = 4 (2012). T: 10

Outcome 1.4 Indicator: Political stability and absence of violence/terrorism score. B = 20 (2013). T = 50

Outcome 2.1 Indicator: Percentage of Teachers at task. B = 23.8 (2013). T = 58

Outcome 2.2 Indicator: Percentage of HIV positive individuals receiving by age ART. B = Adults = 48, Children = 41. T = Adults = 80, Children = 80

Outcome 2.3 Indicator: Existence of a scaled up social protection programme that encompasses the most vulnerable persons. B = No (2014). T = Yes

Outcome 2.4 Indicator: Percentage of all women and men aged 15-49 who agree that a husband is justified in hitting or beating his wife for specified reasons. B: F/M = 58/44 (2011). T: F/M = 52/40

Outcome 2.5 Indicator: Number of new HIV infections, by sex and age. B: Adults = 137,000 Female = 78,306 Male = 60,919 (2013). T: Adults = 107,068.56 Male= 47,068 Female= 60,000

Outcome 3.1 Indicator: % of land under forest and wetlands. B: Forest = 14, wetlands = 10.9 (2013) T: Forest = 18.5, wetlands = 10.9.

Outcome 3.2 Indicator: Number of country diagnostics carried out to inform policy options on sustainable development options. B = 0. T = 12

Outcome 3.3 Indicator: Number of sector policies and plans mainstreaming employment creation. B = 1. T = 4

Applicable Output(s) from the UNDP Strategic Plan: Citizen expectations for voice, development, rule of law and accountability are met by stronger systems of democratic governance; Countries are able to reduce the likelihood of conflict and lower the risk of natural disasters, including from climate change; Growth and development are inclusive and sustainable, incorporating productive capacities that create employment and livelihoods for the poor and excluded.

Project title and Atlas Project Number: Pulse Lab Kampala

EXPECTED OUTPUTS	OUTPUT INDICATORS[17]	DATA SOURCE	BASELINE		TARGETS For each year	DATA COLLECTION METHODS & RISKS
			Value	Year		
Output 1. Ecosystem catalysed by Pulse Lab Kampala to develop innovations with big data and real-time analytics to	1.1 Number of partnerships consolidated between the Lab and Government, UN Agencies, Private sector and Academia to advance SDGs localization with Big Data and real time analytics	Reports from UN Global and partners	There are no (Zero as of 2015) partnerships established between Government, private sector, UN Agencies and Academia		At least 3 partnerships consolidated per year between the Government, UN Agencies, Private sector and academia and the Lab to advance SDGs localization with Big Data and real time analytics i.e 2016, 2017,	Reports produced by UN Agencies and UN Global Pulse on a regular basis

[17] It is recommended that projects use output indicators from the Strategic Plan IRRF, as relevant, in addition to project-specific results indicators. Indicators should be disaggregated by sex or for other targeted groups where relevant.

	Indicator	Source	Baseline	2018, 2019 & 2020	Means of verification
achieve and monitor SDGs localization	**1.2** Number of advocacy events successfully organized/co-organized by the Lab to validate real time monitoring tools to achieve and monitor SDGs	*Reports from UN Global and partners*	There are no (Zero as of 2015) advocacy events around real-time monitoring tools to achieve and monitor SDGs	At least 3 advocacy events per year (i.e 2016, 2017, 2018, 2019 & 2020) conducted in Kampala advocating for the data revolution to advance/monitor SDGs	*Reports produced by UN Agencies and UN Global Pulse on a regular basis*
	1.3 Number of real time monitoring tools used to support the Delivering as One UN process	*Reports from UN Global and partners*	There is no(Zero as of 2015) use of real time monitoring tools to support UN Joint Programming, UN Convergence Areas work and National Development Plans	At least 3 projects per year (i.e 2016, 2017, 2018, 2019 & 2020) completed supporting UN Joint Programming, UN Convergence Areas work and National Development Plans	*Reports produced by UN Agencies and UN Global Pulse on a regular basis*
Output 2. Project and tools developed by Pulse Lab Kampala and partners to monitor and achieve SDG localization	**2.1** Number of tools built by the Lab to use real time data to achieve and monitor SDG localization	*Reports from UN Global and partners*	There are no (Zero as of 2015) user-friendly tools available to use of Big Data, Big Data analytics and data visualizations to achieve and monitor SDGs	At least 3 data innovation tools built and used by the Government of Uganda and development partners to advance/monitor SDGs per year (i.e 2016, 2017, 2018, 2019 & 2020)	*Reports produced by UN Agencies and UN Global Pulse on a regular basis*
	2.2 Number of data innovation projects completed probing the value of Big Data combined with other types of data to achieve and monitor SDGs	*Reports from UN Global and partners*	While successful data innovation initiatives have been completed in Uganda, successful approaches and project have not been scaled up (Zero as of 2015)	At least 3 data innovation projects completed and used to advocate for a global partnership to tap into the data revolution to advance/monitor SDGs i.e 2016, 2017, 2018, 2019 & 2020.	*Reports produced by UN Agencies and UN Global Pulse on a regular basis*

VI. MONITORING AND EVALUATION

In accordance with UNDP's programming policies and procedures, the project will be monitored through the following monitoring and evaluation plans: *[Note: monitoring and evaluation plans should be adapted to project context, as needed]*

Monitoring Plan

Monitoring Activity	Purpose	Frequency	Expected Action	Partners (if joint)	Cost USD (if any)
Track results progress	Progress data against the results indicators in the RRF will be collected and analysed to assess the progress of the project in achieving the agreed outputs.	Quarterly, or in the frequency required for each indicator.	Slower than expected progress will be addressed by project management.	UN partners	10,000
Monitor and Manage Risk	Identify specific risks that may threaten achievement of intended results. Identify and monitor risk management actions using a risk log. This includes monitoring measures and plans that may have been required as per UNDP's Social and Environmental Standards. Audits will be conducted in accordance with UNDP's audit policy to manage financial risk.	Quarterly	Risks are identified by project management and actions are taken to manage risk. The risk log is actively maintained to keep track of identified risks and actions taken.	UN Global Pulse	10,000
Learn	Knowledge, good practices and lessons will be captured regularly, as well as actively sourced from other projects and partners and integrated back into the project.	At least annually	Relevant lessons are captured by the project team and used to inform management decisions.	Universities & UN partners	12,000
Annual Project Quality Assurance	The quality of the project will be assessed against UNDP's quality standards to identify project strengths and weaknesses and to inform management decision making to improve the project.	Annually	Areas of strength and weakness will be reviewed by project management and used to inform decisions to improve project performance.	Universities, UN Global Pulse, Government	12,500
Review and Make Course Corrections	Internal review of data and evidence from all monitoring actions to inform decision making.	At least annually	Performance data, risks, lessons and quality will be discussed by the project board and used to make course corrections.	UN Global Pulse	10,000
Project Report	A progress report will be presented to the Project Board and key stakeholders, consisting of progress data showing the results achieved against pre-defined annual targets at the output level, the annual project quality rating summary, an updated risk long with mitigation measures, and any evaluation or review reports prepared over the period.	Annually, and at the end of the project (final report)			4,000
Project Review (Project Board)	The project's governance mechanism (i.e., project board) will hold regular project reviews to assess the performance of the project and review the Multi-Year Work Plan to ensure	Specify frequency (i.e., at least	Any quality concerns or slower than expected progress should be discussed by the project board and	UN Agencies, Government	5,000

Monitoring Activity	Purpose	Frequency	Expected Action	Partners (if joint)	Cost USD (if any)
	realistic budgeting over the life of the project. In the project's final year, the Project Board shall hold an end-of project review to capture lessons learned and discuss opportunities for scaling up and to socialize project results and lessons learned with relevant audiences.	annually)	management actions agreed to address the issues identified.		

Evaluation Plan[18]

Evaluation Title	Partners (if joint)	Related Strategic Plan Output	UNDAF/CPD Outcome	Planned Completion Date	Key Evaluation Stakeholders	Cost and Source of Funding
Mid-Term Evaluation	UN Agencies, Government	all	all	2018	UN Agencies, Government	10,000
Final Evaluation	UN Agencies, Government	all	all	2020		
Mid-term Evaluation of gender mainstreaming in the UNDP programme	UNDP programme partners	Objective 4	all	2018	UNDP programme partners	10,000

---

[18] Optional, if needed

The above listed evaluations to be done jointly with and/or under UNDP planned strategic results area evaluations.

VII. MULTI-YEAR WORK PLAN [19][20]

EXPECTED OUTPUTS	PLANNED ACTIVITIES	Planned Budget by Year				RESPONSIBLE PARTY	PLANNED BUDGET		
		Y1	Y2	Y3	Y4		Funding Source	Budget Description	Amount
Output 1 Ecosystem strengthened by Pulse Lab Kampala for development and adoption of data innovations with big data and real-time analytics to achieve and monitor SDGs localization	Partner with private sector companies, Government, Academia, UN & Civil society	273,997	273,997	273,997	273,997	UN Agencies, UN Global Pulse	Multi-donor	(*)	1,095,987
	Design, organize and host advocacy events	273,997	273,997	273,997	273,997				39,142
	Communicate, Document, report, and knowledge sharing	39,142	39,142	39,142	39,142				156,570
	Monitoring & evaluation	19,571	19,571	19,571	19,571	Pulse Lab Kampala			78,285
	Sub-Total for Output 1	342,496	342,496	342,496	342,496				1,369,984
Output 2 Tools built by Pulse Lab Kampala & partners are used to achieve and monitor SDGs localization	Identify, design, test, and develop projects	273,997	273,997	273,997	273,997	UN Agencies, UN Global Pulse	Multi-donor	(*)	1,095,987
	Identify, design, test and develop and toolkits	234,854	234,854	234,854	234,854				939,418
	Communicate, Document, report, and knowledge sharing	97,856	97,856	97,856	97,856				391,424
	Monitoring and evaluation	29,357	29,357	29,357	29,357	Pulse Lab Kampala			117,427

[19] Cost definitions and classifications for programme and development effectiveness costs to be charged to the project are defined in the Executive Board decision DP/2010/32

[20] Changes to a project budget affecting the scope (outputs), completion date, or total estimated project costs require a formal budget revision that must be signed by the project board. In other cases, the UNDP programme manager alone may sign the revision provided the other signatories have no objection. This procedure may be applied for example when the purpose of the revision is only to re-phase activities among years.

EXPECTED OUTPUTS	PLANNED ACTIVITIES	Planned Budget by Year				RESPONSIBLE PARTY	PLANNED BUDGET		
		Y1	Y2	Y3	Y4		Funding Source	Budget Description	Amount
	Sub-Total for Output 2	636,064	636,064	636,064	636,064				2,544,256
	Total Outputs								
General Management Support		40,480	40,480	40,480	40,480		Multi-donor		161,920
Direct Project Cost		80,960	80,960	80,960	80,960				323,840
Sub Total		121,440	121,440	121,440	121,440				485,760
TOTAL									4,400,000

(*) Contractual Services Individual. Workshops and Conferences. Audio Visual and Printing production costs. Staffing costs. Travel, Supplies. Rental & Maintenance. Equipment & Furniture.
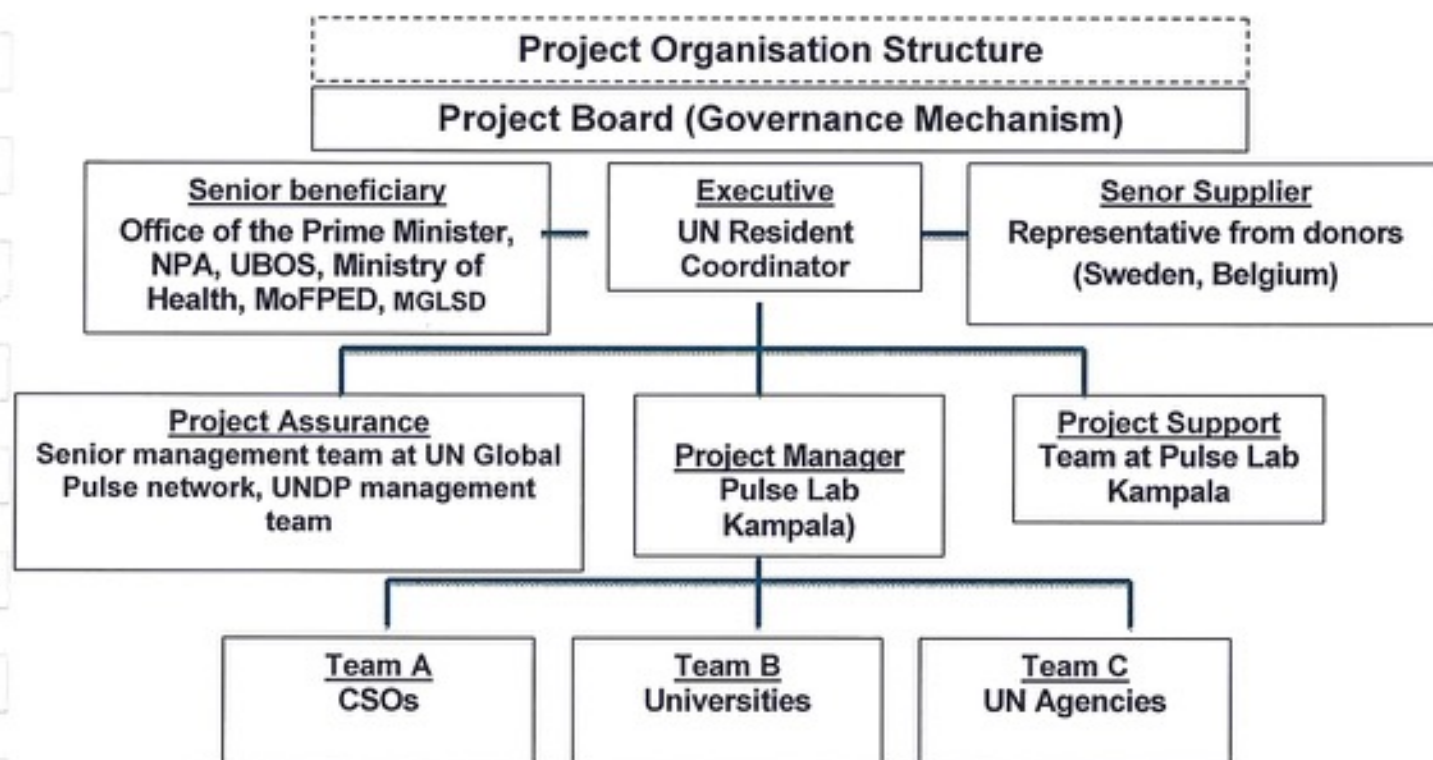
VIII. GOVERNANCE AND MANAGEMENT ARRANGEMENTS

This Project is executed as a Direct Implementation Modality (DIM) by UNDP Uganda Country Office. Its execution is responsibility of the UNDP Resident Representative and a designated Team with specific responsibility assigned to a Project Manager.

The backbone of the UN Global Pulse initiative is its network of country-level Pulse Labs, which employ a build-to-learn approach. Pulse Labs are physical centres of innovation and R&D that bring together government, the UN and local partners in academia and the private sector to test, refine and scale solutions that use real-time big data to support development goals. Crucial to the success of Pulse Labs is having government and local expertise involved in their creation and management.

Quality assurance is provided with monthly (online) meetings of the "Global Pulse Management team" that is formed by: UN Global Pulse Director, UN Global Pulse Deputy, Manager of Pulse Lab Jakarta, Manager of Pulse Lab Kampala, Chief Data Scientist of UN Global Pulse and Partnership Coordinator of UN Global Pulse. During the meetings, internal monthly reports on progress against outputs and bottlenecks for implementation are discussed and strategic measures are agreed. The team leaders of each area of work at Pulse Lab Kampala work closely with their "counterparts" in Pulse Lab Jakarta and New York. Daily communications and weekly (online) meetings take place to discuss project implementation with colleagues in New York. The technical teams (software developer) at the Labs hold a monthly meeting to exchange advances in products and exchange technical expertise and tools.

The overall execution of the programme will be coordinated by UNDP in partnership with UN Global Pulse and partners from Government, Academia, UN Agencies and civil society. UNDP will act as Fund Manager coordinating project management and funding as elaborated in the work programme and budget to be prepared by the Project Manager and approved by the Project Steering Committee (PSC).

Project Organisation Structure

Project Board (Governance Mechanism)

Senior beneficiary	Executive	Senor Supplier
Office of the Prime Minister, NPA, UBOS, Ministry of Health, MoFPED, MGLSD	UN Resident Coordinator	Representative from donors (Sweden, Belgium)

Project Assurance	Project Manager	Project Support
Senior management team at UN Global Pulse network, UNDP management team	Pulse Lab Kampala)	Team at Pulse Lab Kampala

Team A	Team B	Team C
CSOs	Universities	UN Agencies

IX. LEGAL CONTEXT AND RISK MANAGEMENT

Legal Context

√Country has signed the Standard Basic Assistance Agreement (SBAA)

Implementing partner- UNDP (DIM)

This programme document shall be the instrument referred to as such in Article 1 of the SBAA between the Government of Uganda and UNDP, signed on April 1, 1977.

Consistent with the Article III of the Standard Basic Assistance Agreement, the responsibility for the safety and security of the executing agency and its personnel and property, and of UNDP's property in the executing agency's custody, rests with the executing agency.

The executing agency shall:
   a) put in place an appropriate security plan and maintain the security plan, taking into account the security situation in the country where the project is being carried;
   b) Assume all risks and liabilities related to the executing agency's security, and the full implementation of the security plan.

UNDP reserves the right to verify whether such a plan is in place, and to suggest modifications to the plan when necessary. Failure to maintain and implement an appropriate security plan as required hereunder shall be deemed a breach of this agreement.

The executing agency agrees to undertake all reasonable efforts to ensure that none of the UNDP funds received pursuant to the Programme Document are used to provide support to individuals or entities associated with terrorism and that the recipients of any amounts provided by UNDP hereunder do not appear on the list maintained by the Security Council Committee established pursuant to resolution 1267 (1999). The list can be accessed via http://www.un.org/Docs/sc/committees/1267/1267ListEng.htm. This provision must be included in all sub-contracts or sub-agreements entered into under this Project Document.

X. ANNEXES

1. UN Global Pulse Strategic Framework (Summary)
2. About the UN Global Pulse Privacy Policy
3. Project Quality Assurance Report
4. TORs Pulse Lab Kampala Manager
5. Risk Analysis
6. Social and Environmental Screening Template