

**Concept Note**

**TechVeloment**

**Pilot Projects in Africa and Development Innovation Platform**

March 2018

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## Themes for discussion

In December 2017, the Minister for Development Cooperation approved an “Approach and Narrative: Denmark’s TechVelopment Engagement”. The narrative sets a framework for how digital technology can act as a strong driver for economic growth, and how Denmark can integrate digital technology as part of Danish international development cooperation.

While it is the goal to embed digital technologies in Danish development and humanitarian policy and engagements, DKK 60 million has been allocated to pilot initial tech & development initiatives in 2018. This concept notes presents key elements in rolling out the TechVelopment agenda, with a special focus on the use of a main part of the 2018 budget. Based on the initial experience from the 2018 TechVelopment initiatives, additional funds may be allocated in 2019 and beyond with the aim to integrate tech across Danish development engagements.

Although there are no formal requirement to present this tech package to the Programme Committee, the rationale for doing so lies with the novelty of the approach, and the pilot nature of the projects. In this context, the views of the Programme Committee are foreseen on:

1. the nature of the initial pilot projects under the TechVelopment initiative vis á vis broader perspectives on Danish development engagements,
2. further integration of the TechVelopment approach into Denmark’s development engagements through new initiatives and/or budget allocations in 2019 and beyond.
3. key point for use of update of the TechVelopment Approach and Narrative (attached).

## Introduction

Denmark’s Strategy for Development Cooperation and Humanitarian Action – The World 2030 – emphasizes that *“new technological possibilities – “disruption” – may help the private sector in the developing countries skip a couple of development stages and make giant strides forward in terms of productivity and profitability”*.

With “The World 2030” and the Approach & Narrative on TechVelopment, the Minister for Development Cooperation has made it a priority in Danish development cooperation to support developing countries in leapfrogging towards the SDGs through technology adoption, and to promote the realization of the development potential activated by new digital technologies<sup>1</sup>.

The TechVelopment efforts should be seen in the context of the priority given by the Danish government to technological diplomacy, which is rolled out under the government’s ambitious TechPlomacy initiative. The efforts shall also be seen in the context of pursuing the Global Goals. While innovation is highlighted in goal 9, innovation and technology is relevant for the attainment of all Sustainable Development Goals.

The 2018 budget of DKK 60 million will be used for a range of tech & development initiatives. DKK 32 million will go to six pilot activities in three Danish priority countries in Africa. The identification, formulation, and establishment of a Danish tech platform – Development Innovation Denmark – will be supported with DKK 5 million. The remaining budget of DKK 23 million is set aside as a contribution to the Fund for Women Entrepreneurs, managed by the World Bank. This concept note focuses on the pilot projects in Africa and the Danish tech platform. In addition to the DKK 60 million, DKK 10 million will be allocated in 2018 to the Digital Development Partnership, managed by the World Bank.

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<sup>1</sup> For short, ”tech” will frequently be used in this concept note as a term referring to digital technology.

## Context and background

This section gives a brief analysis of the context of the tech package. It includes the context of the six pilot projects in African partner countries and the context of the Danish tech platform.

### Context on tech and development initiatives in Africa

Digital technology has the potential to revolutionize the lives of the poor, unlock development, and prosperity, and accelerate progress towards the Sustainable Development Goals. As illustrated in the World Bank's World Development Report 2016, Digital Dividends, the exponential spread of digital technologies is transforming societies and improving people's lives. E-learning allows provision of education independent of time and place, mobile financial services reduce corruption, online access to meteorological information enables farmers to optimize their harvest, and solar-energy brings electricity to the remotest villages.

The International Telecoms Union estimates that seven billion people - 95 % of the global population - are covered by mobile network, and that global internet coverage is within reach in the next decade. Still, more than half of the world's population is not using the internet, and nearly two billion people do not own a mobile phone. These numbers indicate that the potential for creating development through digitalization is massive. The numbers also indicate that digitalization could leave people behind in a digital world. If the benefits of digital technologies are not spread across societies, their disruption of labour markets may cause loss of jobs. In addition, state and corporate use of digital technologies could lead to control rather than empower citizens. Such risks must be addressed when pursuing the potential of digital technologies.

In late 2017, steps were taken to identify pilot projects for funding under the 2018 budget for innovation and technology. During a round of consultations, Danish embassies in Africa submitted more than 25 project ideas to the Ministry for review. In early 2018, an exploratory tech mission from GUS and the Tech Rep in Silicon Valley visited Kenya, Ethiopia, Tanzania, Rwanda, and South Africa to assess the tech landscape, and flesh out possible pilot projects from the long-list of project ideas.

The mission found that mobile coverage is relatively high with the poorest households in Africa now being more likely to have access to mobile phones than to toilets or clean water. Still, internet penetration is only at around 20 %. General lack of regulation, data protection legislation and accountability standards has enabled an emerging ecosystem of tech startups. However, lack of regulation permits mass collection of personal data in many African countries, leaving the majority of Africans vulnerable to misuse of their data privacy. Progress within eGovernance has moved much slower than the private sector, despite obvious gains in terms of more efficient public service delivery, facilitating foreign investments and combating corruption.

The mission noted great interest for collaboration with Denmark among potential partners within local tech ecosystems, government agencies, international organisations and civil society. The mission also identified the challenges associated with limited internet access outside the cities, regular power outages, and the lack of digital skills.

### Context of the Danish platform for tech and innovation

With the Approach & Narrative on TechDevelopment, Denmark along with our partners will harness the digital dividend, thereby contributing towards bridging the digital divide. Not only

will this strengthen Danish development cooperation. It will also open up new commercial and innovation opportunities to the benefit of Danish companies and institutions.

Consultations with stakeholders in the Danish development community indicate that within the startup environment and among NGOs, there is interest in a platform that brings together stakeholders in the development field on co-creation, innovation, and technology. Many NGOs already work with technology and development, including the emergence of the new strategic partnerships for civil society, but call for inspiration and cooperation with the private sector. Similarly, a number of Danish entrepreneurs deal with technological solutions especially in Africa, but are not familiar with the wider Danish engagement in the countries concerned.

Therefore, there seems to be a need for facilitating the exchange of experience, knowledge and ideas - in line with the Development Policy and Humanitarian Strategy's focus on drawing on the entire Danish society as a strength in development efforts. 'Development Innovation Denmark' (working title) is a platform that can contribute to the exchange of ideas and cooperation between small entrepreneurs and other actors, including the Ministry of Foreign Affairs and Danish NGOs and interests groups, as well as involving Danish universities and larger tech-companies. It is also a goal that the platform connects with tech hubs in developing countries.

## The package

As mentioned above, the package presented to the Programme Committee consists of six pilot projects in African partner countries totaling DKK 32 million, as well as support to 'Development Innovation Denmark' in the amount of DKK 5 million. On 22 February, the Minister for Development Cooperation was informed of the package along with a proposal to allocate additionally DKK 10 million for the Digital Development Partnership. Furthermore, other Tech-Development initiatives are being rolled out, including the assignment of a Nairobi-based Tech-Development adviser and initiatives related to humanitarian aid (ref. Annex).

### African pilot projects

The pilot projects represent a broad spectrum of the African tech scene. Five of the projects are being considered on basis of the identification made by the Danish embassies in Ethiopia and Tanzania in late 2017, and further developed during the tech mission in early 2018. The sixth project was identified during the tech mission to Kenya in January 2018.

Of the six projects, the African Girls Can Code Initiative (see below) has been fast-tracked for approval by the Ambassador to Ethiopia in early March. The reason is two-fold: 1) the project is fully developed, and 2) the launch of the project had to take place on 13 March 2018 during the annual meeting of the UN Commission on the Status of Women in New York.

### Brief presentation of the pilot projects

1. African Girls Can Code (Ethiopia): The objective of the initiative is to equip young girls with digital literacy, coding, and personal development skills. The initiative has three components: 1) coding camps targeting African girls aged 17-20 years; 2) mainstreaming ICT, gender, and coding into national curricula in African countries, aiming to teach girls to reap the benefits of the digital boom; and 3) conducting media campaigns and outreach to inspire young girls and women to choose educations and careers within coding and ICT. African Girls Can Code is a new joint initiative by UN Women and the UN International Telecommunications Union.

2. BlueMoon (Ethiopia): As an agribusiness incubator, blueMoon supports startups in various ways, including by providing office space with high-speed wifi, networking, and peer learning events. BlueMoon also helps address the gap between early stage startups and sources of capital by taking the financial risk and provide options for next rounds of financing after initial seed funding. It holds “Lions Den” events to help raise equity financing for tech-companies, and runs an “Angels Network” to facilitate investments for startups. Danish support may finance a Maker’s Lab, which will provide physical space for peer-to-peer learning aimed at promoting farming practices through use of innovative technologies.

3. Dar Teknohama Business Incubator (Tanzania): As a tech incubator, DTBI supports youth with innovative ideas to create startups and local ICT companies. The support includes mentoring, coaching, and it facilitates access to new tech trends and finance. DTBI is a public-private partnership. It is managed by a Board as an autonomous entity under the Tanzanian Commission on Science and Technology. It has a strong network, a dynamic leadership, and can move swiftly on its initiatives. DTBI wishes to establish a space for equipping youth and women start-ups and enterprises with entrepreneurship skills through digital platforms for potential scale-up and job creation. It also plans to strengthen its presence across Tanzania.

4. Sahara Ventures (Tanzania): The hub operates three entities: Sahara Accelerator, Sahara Sparks, and Sahara Consulting. Due to its convening power, Sahara Sparks is well known in Tanzanian tech-circles. It runs an annual innovation and tech entrepreneurship event, which promotes startups by giving them the opportunity to pitch and exhibit their products. Sahara is planning to establish an e-Kilimo Accelerator, which will be Tanzania’s first technology for food and agriculture startups accelerator program. Danish support may go to this initiative. Sahara is a member of AfriLab, - an Africa-wide tech-network –, and will host the annual AfriLab event in the 2<sup>nd</sup> week of October 2018 for more than 60 tech-hubs across Africa.

5. Lake Victoria Cargo Drone Challenge (Tanzania): In Tanzania, the Mwanza and Lake Victoria region has become a prime location for testing drones as a means of fast transport supporting health and other services. While rural, but with a dense population, drones have for example reduced transport of medical items to Lake Victoria islands from plus 24 hours to less than 2 hours. The regional authorities in Mwanza, in collaboration with the World Bank, wish to test cargo drones. For this purpose, funds can be channelled through the Digital Development Partnership, - a multi-partner trust fund under the World Bank. This and related tech initiatives could be bundled in a package that aims to mainstream tech solutions across different sectors.

6. Moringa School (Kenya): The school provides training for people being passionate about a career in tech and coding. Since 2014, the school has trained around 600 students from a variety of backgrounds. The school has a 95 % job placement rating post-training with 350 % average salary increase from before to after graduation. The school is economically self-sustained. However, students must repay the tuition fee after their graduation. Therefore, the school wishes to offer scholarships to low-income students, including girls from the Kibera slum. In collaboration with other schools (on a waiting list), Moringa also wishes to scale up its secondary school coding program with the ambition to train over 1 million students in the next 5 years.

#### Danish platform for tech and innovation

The “World 2030” specifies that support to innovation is a priority. Denmark supports this in several ways:

- UNWOMEN, UNFPA, UNDP, and UNICEF receive Danish support for their innovation facilities. Many other multilateral partners also pursue new solutions in their work.
- Support to Danish civil society includes criteria for innovative approaches to international development cooperation and humanitarian action. The Strategic Partnerships can allocate up to 10% of the engagement budget to innovation.
- In the development of private sector initiatives, new partnerships and international platforms have been created such as Global Alliance for Humanitarian Innovation.
- Denmark engages in joint activities with stakeholders on hackathons etc. UNLEACH and maternity foundation being two examples.

However, these efforts are not interlinked and there is no place for users/contributors in the field of development to establish lasting networks on how to innovate the field of development. Also, in light of the Danish TechPlomacy and TechVelopment initiatives, it is a priority that the efforts and resources used on innovation in development is visible, that synergies can be created, and collaboration across organisational boundaries and sectors can be established.

Against this background, the objective of DIDK is to make development efforts more efficient and effective by rethinking how the SDGs can be achieved in new and more efficient ways.

This will be done by:

- Strengthening the development innovation eco-system in Denmark with the aim to enhance efficiency of development engagements in partner countries.
- Utilizing internationally acknowledged strength of Danish development assistance to ensure that the Danish development engagements continue to be a frontrunner in innovation for development.
- Enhanced linkages between the international development eco-system and Danish users/contributors in the field of development innovation.
- Creation of strong linkages to activities in the partner countries, including innovation facilities in selected countries (could be Tanzania and Ethiopia).
- Providing limited and targeted support to selected initiatives through an innovation fund managed by DIDK.

An external consultant will be assigned to support the rolling out of the platform.

## Justification

This package is developed based on the Approach & Narrative on TechVelopment. Geographically, TechVelopment focuses on Africa and Danish priority countries. Thematically, the broad focus areas are: 1) empower women and girls through digital literacy, 2) engage the private sector through new business models, using digital technology to promote entrepreneurship and job opportunities, 3) use digital technology in humanitarian and development contexts to address refugee and migration flows, 4) promote governance and regulation for sound use of digital technology in development, and 5) promote rights through digital technology.

Identification of the pilot projects is based on the above TechVelopment focus areas, making specific use of the following selection criteria: 1) empowerment of women and girls by enabling their contribution to technological development, 2) turning digitalization into entrepreneurship and decent jobs especially for youth, 3) promoting innovative business models and leveraging private sector engagement (including matchmaking with relevant Danish partners).

In addition, it has been important to identify partners that have a potential for enhancing the achievement of the SDGs, but have not yet secured adequate funding on the commercial market. Thus, Danish support shall not crowd out private finance (or other public funding, for that matter), but add value where there is a documented need for support.

This also apply to blueMoon, Sahara Ventues, and Moringa School, which partly operate as commercially driven entities. Support to these partners will enable them to operate separately in areas that are not intended to be economically viable, thereby reaching target groups such as girls from slum areas, and young entrepreneurs with promising ideas, but no capital.

Against this background, three of the African pilot projects primarily focus on support to tech entrepreneurs, two focus on tech opportunities for women and girls, and one focus on new tech opportunities. In short, the key objectives of the six projects are:

1. African Girls Can Code Initiative: Support girls' digital skills and employment
2. BlueMoon: Support entrepreneurs/startups, employment opportunities
3. Dar Teknohama Business Incubator: Support to startups – employment opportunities
4. Sahara Ventures: Support to entrepreneurs/startups – employment opportunities
5. Lake Victoria Drones: Test tech solution, improve living conditions
6. Moringa School: Support girls' digital skills and employment and employment

Related to the Lake Victoria Drones project, the Minister for Development Cooperation – upon request - received a submission on 16 January 2018 on the potential use of drones in a development and humanitarian context. While demonstrating the use of drones for the benefit of people's lives, the Lake Victoria project offers an opportunity to follow up on this submission.

As far as the Danish tech platform is concerned, the above mentioned selection criteria also apply. Consequently, in developing the platform, an assessment will be made to identify the needs within the Danish tech ecosystem. By supporting the development of the platform, it will be ensured that the platform provides additional value in terms of making Danish stakeholders in a better position to engage with tech partners in developing countries, or to widen their existing engagements regarding attainment of the SDGs through use of digital technologies. In addition, initiatives targeting transparency and anti-corruption will be supported.

## Theory of change

The support to the pilot activities under the TechVelopment package is based on the following theory of change:

- Digital technology is essential for the achievement of the Sustainable Development Goals. This is reflected in goal 9, under which one of the targets is to promote universal access to the internet in developing countries by 2020.
- If rolled out for the benefit of all, digital technology is a driver of economic growth and employment. This requires transformation from jobs that become redundant to new decent employment opportunities.
- Citizens in developing countries, including the young generation and women, stand to gain from access to digital technology.
- The gains not only lie in entrepreneurship and employment opportunities, but also in empowering citizens through access to information, transparent governance, and fulfillment of rights.



- By harnessing the potential of digital technology, alternatives to migration and social unrest can be promoted.
- Tech hubs and incubator entities are the main instruments to spread development gains from digital technology.
- By supporting pilot activities in this area, the TechVeloPMENT initiative will make a contribution to bridge the digital divide, and reap the fruits of the digital dividend.
- TechVeloPMENT initiatives gradually will be integrated into Danish development engagements, thereby delivering the engagements in a smarter, more inclusive and effective manner.

## Management modalities

Five of the six pilot projects will be managed by the embassies in Ethiopia, Tanzania, and Kenya. MFA (VBE) will manage the Lake Victoria drone project through a trust fund agreement with the World Bank. The trust fund agreement on the Lake Victoria drone project may be combined under one agreement, which also includes additional support to the Digital Development Partnership. Development Innovation Denmark will be managed by MFA (KFU).

Some initiatives are still at an early stage of preparation. In those cases, implementation and management modalities are still to be determined. Modalities, including the application of appropriation/tender procedures, where relevant, will be clarified prior to the approval by grant making authorities. Management of the projects will follow the procedures laid out in the Guidelines for Programmes and Projects.

In managing the projects, the aim is to ensure light procedures while also establishing synergies and the closest possible linkages between the pilot activities and relevant programs. In doing so, efforts will be made to mainstream tech into Danish development cooperation.

## Budget

The budget of this package is allocated as follows (in mill. DKK):

1. African Girls Can Code Initiative:	10
2. BlueMoon:	7
3. Dar Teknohama Business Incubator:	6.5
4. Sahara Ventures:	1
5. Lake Victoria Drones:	4.5
6. Moringa School:	3
7. Development Innovation Denmark:	<u>5</u>
Total 2018 budget	<u>37</u>

The allocations are based on preliminary need assessments. Therefore, and with the exception of African Girls Can Code Initiative, the budget allocations are tentative.

## Annexes

### Process Action Plan (PAP)

Some of the planned initiatives outlined in the PAP are subject to the approval by grant making authorities, and to the application of the relevant appropriation/tender procedures.

Action	Responsible unit	Timeline
First step on FL18-initiative “Danida Entrepreneur Facilitation Hub” (working title) with budget allocation of DKK 60 million	VBE	June 2017
Drafting of “Approach and Narrative” on TechVelopment	UPF, MFA tech working group	October-November 2017
Consultation process with four embassies on TechVelopment pilot projects initiated	VBE	November 2017
Appropriation for innovative IBM-DRC model to track and predict refugee and migrant flows	HMC	29 November 2017
TechVelopment “Approach and Narrative” approved by Minister for Development Cooperation	UPF, tech working group, Minister	4 December 2017
Consultation process with four embassies concluded. Long list of project ideas prepared	VBE	Mid-December 2017
Preparation of tech mission to Africa	Tech working group	January 2018
Tech mission to Kenya, Ethiopia, Tanzania, Rwanda and South Africa	Tech working group	29 January – 8 February 2018
Analysis and short-listing of project proposals	VBE, tech working group	February 2018
Minister informed of status on TechVelopment pilot projects	UPF, tech working group	22 February 2018
Dialogue with World Bank on Lake Victoria drone project through Digital Development Partnership	VBE, UPF, KFU	February 2018
Launch of regional TechVelopment adviser in Nairobi	AFR, KFU, UPF, Minister	5 March 2018
Launch of African Girls Can Code Initiative – first of six TechVelopment pilot projects	VBE, amb. Addis, Minister	13 March 2018
Preparation of Concept Note on TechVelopment package	VBE, tech working group, embassies in Addis, Dar, and Nairobi	March 2018
Presentation of TechVelopment package to the Programme Committee	VBE, Programme Committee	4 April 2018
Preparation of pilot projects	Embassies in Addis, Dar, and Nairobi	April-July 2018

Action	Responsible unit	Timeline
Consultations with Digital Development Partnership, incl. on Lake Victoria drone project	VBE, UPF	March-April 2018
Hiring of external consultant to help prepare Development Innovation Denmark	KFU	April 2018
“Launch” of support to Digital Development Partnership, incl. Lake Victoria drone project	VBE, UPF, Minister	At the margins of the WB/IMF Spring Meetings, 20-22 April 2018
Review of concept note regarding Development Innovation Denmark, and decision on way forward	KFU, tech working group	May 2018
Update of the TechVelopment Approach & Narrative	UPF, involved units	Q2 of 2018
Launch of prototype IBM-DRC model to track and predict refugee and migrant flows	HMC	Q2 of 2018
Recruitment of Nairobi-based TechVelopment adviser	tbc	Q2 of 2018
Preparation of DIDK formulation/tender document.	KFU/OKO	Q3 of 2018
Launch of Dar Teknohama Business Incubator Launch of Sahara Ventures, Tanzania Launch of blueMoon, Ethiopia Launch of Moringa School, Kenya	Embassies in Dar, Addis, and Nairobi	Q3 of 2018
Launch of Development Innovation Denmark	KFU	Q3 of 2018
Stocktaking of early experience from pilot projects	Tech working group together with involved units and embassies	1 <sup>st</sup> half of 2019
Planning and roll out of 2019 TechVelopment initiatives	Tech working group, relevant MFA units	2019

## Results Framework

This preliminary results framework reflects the diversity of the pilot activities in terms of scope and duration. Some of the activities are new, for which reason the output baseline is zero. Others are newly established, for which reason the baseline will be determined at start of the project.

Project title		TechVeloport: Pilot projects in African priority countries and development innovation platform	
Development objective		Support developing countries in leapfrogging towards inclusive economic growth through adoption of digital technologies	
Project objective		Make development efforts more efficient and effective by promoting and integrating digital technology in development cooperation	
Impact Indicator		Pilot activities in three African countries and Danish platform	
Baseline	Year	2018	Seven pilot activities initiated by Q3 of 2018
Target	Year	2020	Seven pilot activities successfully implemented or under implementation.
Outcome		Pilot projects demonstrating potential for developing digital skills, entrepreneurship, and employment.	
Outcome indicator		Number of startups, entrepreneurs, and individuals adopting digital technology	
Baseline	Year	2018	TBD on a project-by-project basis (ref. below)
Target	Year	2020	85 startups assisted, 700 individuals trained
Output		African Girls Can Code Initiative (4 years): Digital literacy	
Output indicator		Number of girls trained	
Baseline	Year	2018	Zero girls trained in digital literacy
Target	Year	2020	400 girls trained in digital literacy
Output		BlueMoon (2 years): Startups supported	
Output indicator		Number of startups	
Baseline	Year	2018	Zero startups
Target	Year	2020	30 startups
Output		Dar Teknohama Business Incubator (18 months): Startups incubated	
Output indicator		Number of startups	
Baseline	Year	2018	TBD at start of project
Target	Year	2020	Baseline plus 20 startups
Output		Sahara Ventures (1 year): Startups supported	
Output indicator		Number of startups	
Baseline	Year	2018	TBD at start of project
Target	Year	2020	Baseline plus 25 startups
Output		Lake Victoria Drone project (2 years): Use of drones for public services (health)	
Output indicator		Number of drone uses, following drone tests	
Baseline	Year	2018	Zero at start of project
Target	Year	2020	10 drone uses/startups
Output		Moringa School (2 years): Digital literacy	
Output indicator		Number of girls	
Baseline	Year	2018	TBD at project start
Target	Year	2020	xxx individuals trained (TBD)
Output		Development Innovation Denmark (2 years): Linkages established on TechVeloport with the purpose of enhancing the achievement of the SDGs	
Output indicator		Number of linkages/partnerships established between stakeholders	
Baseline	Year	2018	TBD at start of project
Target	Year	2020	Baseline plus 20

## Risk Management Matrix

### *Contextual risks*

<b>Risk factor</b>	<b>Likelihood</b>	<b>Impact</b>	<b>Risk response</b>	<b>Comment</b>
The identified tech initiatives are part of vibrant tech ecosystems. The tech partners may revise their strategies, change scope of work, or lose steam.	Unlikely	Significant	Continued monitoring of selected partners. Support aims to make partners viable. A flexible approach to collaboration.	
Other donors may offer support, leading to over-funding of initiatives.	Unlikely	Major	Close dialogue with partner. Donor coordination.	
Danish tech actors have limited interest in a Danish tech and development platform.	Unlikely	Minor	Preparation of Development Innovation Denmark will include a needs assessment based on which the design of the platform will be made.	If, against expectations, the assessment documents no need at all, the pilot projects in African will still go ahead and the funds be reallocated to other pilot projects.

### *Programmatic risks*

<b>Risk factor</b>	<b>Likelihood</b>	<b>Impact</b>	<b>Risk response</b>	<b>Comment</b>
Partners' business models become financially viable without support.	Unlikely	Minor	Careful assessment of value added of Danish support, targeting – as relevant - non-commercially viable business areas.	Support must not disrupt sound business models, and crowd out private financing.
Some of the supported tech initiatives are unfocused and lack strategic objective.	Likely	Minor	Some of the young tech hubs have limited capacity, and are not well consolidated. The Danish support will help address these issues.	
Danish tech actors might find it challenging to partner with African tech hubs.	Likely	Significant	A key rationale for establishing the Danish tech platform is to assist in creating partnerships between African tech hubs and Danish tech actors.	

### *Institutional risks*

<b>Risk factor</b>	<b>Likelihood</b>	<b>Impact</b>	<b>Risk response</b>	<b>Comment</b>
The tech ecosystems in Africa - and in Denmark - are rela-	Unlikely	Significant	Digital development is a fast moving train. Most actors are enthusiastic to	

<p>tively young and rely on key individuals staying engaged, potentially leaving gaps if they drop out.</p>			<p>take part. This also applies to tech and development. The TechVeloopment initiative is expected to stimulate even more enthusiasm and engagement.</p>	
<p>Voices may argue that there is limited or no role to play for public development cooperation in promoting digital technology, and that private actors/the market is sufficient.</p>	<p>Likely</p>	<p>Minor</p>	<p>Analysis by the World Bank and others have documented that development cooperation and the public sector has an important role to play in supporting tech incubators and helping create an enabling environment for better use of digital technology for all. The pilot activities under this package are identified with this in mind.</p>	

## **Other tech initiatives**

While other Danish tech initiatives continuously are initiated, below are four tech initiatives, which illustrate the wider Danish engagement on TechPlomacy and TechVelopment.

### Digital Development Partnership (DDP)

DDP is a multi-stakeholder forum managed by the World Bank. DDP is primarily set up to operationalize the 2016 World Development Report on Digital Dividends and to offer a platform for digital innovation and development finance. It brings public and private sector partners together to catalyze support to developing countries on digital development strategies and plans.

Denmark will contribute to the DDP with DKK 10 million.

Support to the Lake Victoria drone project will be channeled through DDP.

### TechVelopment adviser

With Nairobi as a key tech hub, Kenya is one of the leaders on the African continent on rolling out digital and mobile technology.

Therefore, Denmark will assign a regional TechVelopment adviser to be located in Nairobi.

The advisor will be tasked to collect information, build strong network in Africa with important actors on the tech scene, and support the implementation of TechVelopment projects.

### Tech-initiative for humanitarian action

Denmark supports Danish Refugee Council with DKK 2.5 million in order for the DRC to develop, together with IBM, a new innovative mixed-migration model, which will improve humanitarian response planning.

### World Economic Forum

In January 2018, Denmark entered into a Memorandum of Understanding with the World Economic Forum by which collaboration on Technology and Innovation is one of five focus areas. Based on the MoU, working relations will be strengthened between the Forum's Centre for the Fourth Industrial Revolution in San Francisco and the Danish Tech-Representation in Silicon Valley.

## Approach and Narrative: Denmark's TechVeloPMENT Engagement

Digital technologies are proven enablers of development and strong drivers for economic growth.<sup>1</sup> Digitalization is also essential to achieve full implementation of the SDGs. The exponential spread of digital technologies is already improving societies and people's lives. E-learning allows provision of education independent of time and place, mobile financial services reduce corruption, online access to meteorological information enables farmers to optimize their harvest, and solar-energy brings electricity to the remotest villages. The International Telecoms Union (ITU) estimates that seven billion people - 95 % of the global population - live in an area covered by mobile-cellular network, and global internet coverage is within reach within the next decade. At the same time, more than half of the world's population is not using the internet, and nearly two billion people do not own a mobile phone. These numbers indicate that the potential for creating development through digitalization is massive, but also that digitalization causes new gaps between the "haves and have nots". In addition, digitalization disrupts the established way of doing things, including current labour markets, by causing loss of traditional jobs.

Digital technologies are opening up new possibilities for increased transparency, accountability and citizen participation in policy-making and service provision. However, the technological development also presents new challenges. Digital services are introduced in areas where governments used to have monopoly, i.e. land rights registration. Thereby, digitalization can cause privatization of rights, which is the responsibility of the government to protect. Thus, we risk individual rights are undermined without governance being an integral part of the technological development.

### Denmark at the digital forefront

The rapid technological development implies that it is crucial for Denmark to make digitalization and technological innovation a crosscutting priority in our development cooperation to remain a relevant and effective partner. We must be able to identify and harness the digital dividends and bridge the digital divide. We must also keep ourselves informed about the technological development and its implications in our partner countries and ensure a stronger foothold in the innovation hubs of the future. Not only will this strengthen Danish development cooperation. It will also open up new commercial and innovation opportunities to the benefit of Danish companies and institutions.

This document lays out the strategic approach on digitalization, technology and innovation for the Danish development cooperation. It shortly describes the purpose of Denmark's TechVeloPMENT engagement, the role for the Danish Ministry of Foreign Affairs and the strategic priorities.

Denmark's strategy for development cooperation and humanitarian action, "The World 2030", states that "*we will keep in mind that new technological possibilities – "disruption" – may help the private sector in the developing countries skip a couple of development stages and make giant strides forward in terms of productivity and profitability*" and that "*we favour innovative and courageous partnerships that are willing to take risks...partnerships oriented towards synergy, innovation and breaking new ground*". Technological diplomacy is also a prominent element of Denmark's Foreign and Security Policy Strategy 2017-18 and Denmark has positioned itself

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<sup>1</sup> The World Bank Group (2016): World Development Report 2016. Digital Dividends.



pro-actively with the launch of the “TechPlomacy initiative” and the appointment of the world’s first tech ambassador based out of Silicon Valley but with a global team and mandate. As such, digitalization is a strategic priority in Danish foreign policy and development policy and an area where Denmark - based on our values, principles and experiences with a highly digitalised public sector - can help set the global foreign and development policy agenda in the coming years. The Danish policy also underpins EU’s ‘Digital for Development’ (D4D) approach and the implementation of SDG 9 among others.

### **Purpose of engagement and role for the Danish Ministry of Foreign Affairs**

The *overall purpose* of the Danish TechVeloPMENT engagement is to:

- Support developing countries in leapfrogging development through technology adoption.
- Promote the realisation of the development potential activated by new technologies.
- Promote better preparedness for new labour market conditions due to digitalisation.

In our development cooperation, digital technologies should be a means to achieve results rather than a goal in itself. Digitalization can enhance our efforts to solve development challenges and can even create breakthroughs in terms of enabling solutions to challenges we have not yet been able to solve.

Digitalization is a cross-cutting tool to implement our strategy, “The World 2030”. In other words: Digitalization is not a new, separate focus area, but a tool embedded in the comprehensive approach of Danish development policy.

Our TechVeloPMENT engagement should be realized through partnerships with innovative organisations, academia and private companies, including entrepreneurs and start-ups. Denmark can play an important role in cooperating with the private sector on promoting new digital solutions. This includes traditional diplomacy – opening doors – but also being ready and able to invest and carry some of the risks when new actors with new ideas appear.

Our *main role* will be:

- To promote partnerships by identifying and connecting actors, including linking Danish actors with local actors on the ground, and to promote exchange of knowledge and foster innovation, synergy and breaking new ground.
- To identify groups being cut off from the benefits of digitalization and to initiate and support efforts to bridge the digital divide with a focus on access and in accordance with our commitment to the UN Sustainable Development Goals (SDGs).
- On a normative level to contribute to and facilitate dialogue and mutual learning regarding the challenges increased digitalization implies for societies and potential solutions, including digital governance, regulation and framework conditions.

### **Strategic priorities for Denmark’s TechVeloPMENT engagement**

The strategic priorities of our TechVeloPMENT engagement include a geographical and a thematic focus.

*Geographically*, our engagement will be focused on Africa and Danida priority countries. Africa has the greatest digital divide combined with a significant leapfrogging potential. The particular focus on our priority countries is to promote good practice examples of technology hubs and digital innovation to stimulate employment and growth, and to integrate digitalisation into our existing activities.

*Thematically*, our engagement will mainly be focused on the following:

- Promoting empowerment of women and girls by enabling their contribution to the technological development and by efforts to bridge the gap between men and women's access to and benefit from innovative technologies.
- Promoting sustainable economic growth by promoting digital literacy and skills and by supporting interventions that turn digitalization into entrepreneurship and decent jobs, especially for the youth.
- Promoting the development of partnerships, innovative business models and leverage of private sector engagement in TechVelopment.
- Promoting technological innovation in humanitarian and development contexts, including the use of new data streams such as big data for early warning and strengthened crises preparedness to address refugee and migration flows.
- Promoting digital governance and regulation, including national, interstate and global governance frameworks for sound use of technology in development.
- Promoting rights through digital technologies.

Denmark will also advance the agenda and leverage its influence through established strategic partnerships with the EU, UN, World Bank and other multilateral organisations, including the EU's efforts on D4D and Danish support to the UN innovation funds, as well as by enhancing focus on innovation, digitalization and technology in cooperation with civil society organisations. Denmark will also engage with the UN system and other partners to promote dialogue on normative and human rights related dimensions of technological developments. Finally, a focus on youth will be crosscutting, since the global youth is at the same time disruptor, enabler, user and driver of tomorrow's technology.

### **Building organisational capacity**

While implementing a number of flagship projects in cooperation with partners and working towards digitalisation becoming an integrated part of Danish development cooperation, we will take steps to build capacity and knowledge in our own organisation regarding digitalisation as a tool in development cooperation. Denmark's tech ambassador and his team will take an active role in promoting the Danish TechVelopment engagement as a part of the wider TechPlomacy initiative.