

DT4D

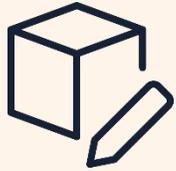
DISRUPTIVE TECHNOLOGIES FOR DEVELOPMENT

6

**DT4D Lessons Learned
- Toward Innovative
agile processes**



Key Lessons Learned incorporated in DT4D 2.0



DT4D Challenge Model & Design

- Develop a specific **thematic scope** and **technologies** targeting global and regional demand
- Strengthen support to teams, from **conceptualization** and design to **implementation** phase
- Consider **additional support** for most promising pilots **preparing scale-up phase**



Legal & Procurement

- Continue the development and application of the **WBG Sandbox Approach** where appropriate in close collaboration with corporate units
- Increase **awareness building and advisory support** to teams along the process through knowledge events, bilateral meetings and guidance notes
- Jointly **facilitate knowledge exchange opportunities** between DT4D alumni and emerging project teams to strengthen legal/procurement approach



Partnerships

- Connect and create synergies with a wide range of **internal and external partners** related to disruptive technologies and innovation
- **Deepen existing partnerships** (e.g., ESA, ITS Technology & Innovation Lab) by co-hosting workshops and leveraging each other's outreach channels
- Consult and tap onto the networks of **intermediaries that work with technology providers** to identify interesting solutions and examples relevant to development challenges



Annex: Highlights from



Cases

◀ Highlights

- *Highlights on regulatory activities by DT4D teams*
- *Highlights on Covid-19 relevant activities by DT4D teams*
- *Highlights on sustainable development activities by DT4D teams*
- *Sample Newsletter on Drones Webinar*

Highlights on regulatory activities by DT4D teams



- **Africa Drone Regulation**



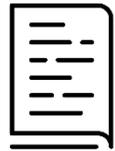
- **Sandbox Approach: Evoke**

Africa Drone Regulation

Slow pace of regulatory change limits the potential business case for drone operators - slowing technology adoption.

14 African Countries

(26% of those on the continent)

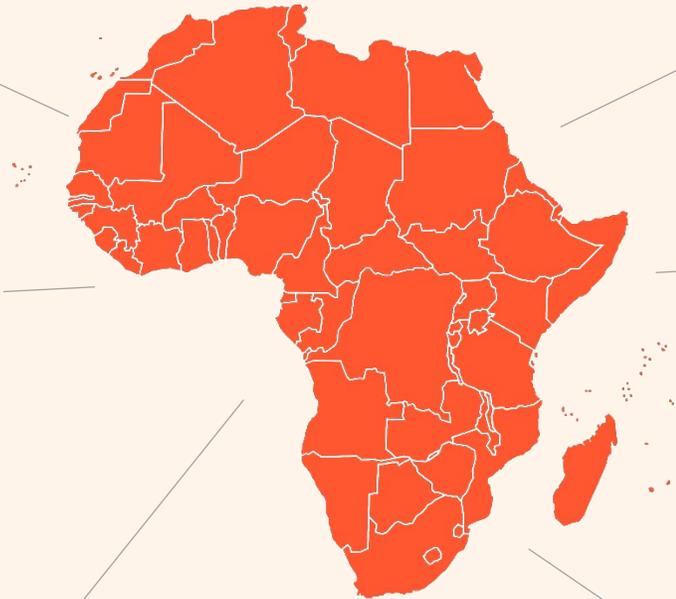


had published dedicated UAV regulations by July 2017.



7 Countries

appended early ICAO guidance from traditional aviation to amend and enable low-altitude drone operations. Little progress has been made since.



Forthcoming Study -



"State of Drone regulations across Africa and path towards harmonization"
D. Soesilo, D. Guerin, C. Ochoa, E. Anderson, 2020 + WEF + IFC

Countries are following diverse approaches ranging from:



Outright Ban

to



Visual Line of Sight (VLOS) requirement

to



Experimental use of Beyond Visual Line of Sight (BVLOS)

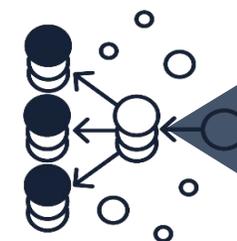
to



No regulation at all

'Drones for Transport in Africa' pilot has increased the understanding of the challenges and opportunities of industrial use of drones

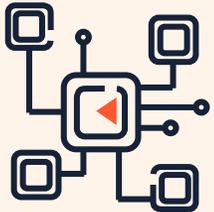
- Emerging technologies —such as unmanned aerial vehicles (UAVs) and drones— **are changing all end-to-end steps in business models, reshaping competitiveness of sectors and disrupting global value chains** (e.g., healthcare, logistics, manufacturing); this has also been accelerated during COVID-19.
- **The DT4D Program supported the Drones for Transport in Africa project to conduct a review of all regulations, policy dialogues and regulatory gaps in the African continent on Unmanned Aerial Systems**, after the African Drone Forum conducted regulatory consultations with 1000+ delegates (including regional and national regulators from 26 African countries). The full **research report and updated drone regulations database** will be made available as part of the community knowledge repository on the [ADF website](#). **The DT4D support has allowed WBG to become one of the coordinating actors at the very early stage of a fast-evolving effort bringing East African regulatory bodies together.**
- **The pilot is an example how DT4D Program can enable and accelerate the adoption and use of emerging technologies in priority industries** by i) strengthening the enabling environment, ii) capturing and analyzing new business models, and iii) helping to initiate and manage multi-stakeholder processes.



What is a 'Sandbox Approach'?

An internal 'Sandbox Approach' for WBG Teams *Towards agile and innovative processes*

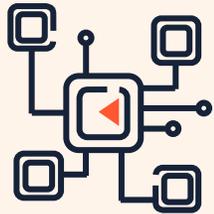
- The 'Sandbox Approach' is set up:
 - To allow **small scale, live testing** of innovations in a **controlled environment** (operating under a special exemption, allowance, or other limited, time-bound exception) under the supervision of regulators (CGAP 2017)
 - To create a **conducive** and **contained space** where incumbents and challengers experiment with innovations at the edge of even outside of the existing framework (UNSGSA, *Briefing on Regulatory Sandboxes*)
 - To leverage **iterative co-creation and agile processes** for piloting, evaluation, and the scaling of new ideas
- Note:
 - Contact DT4D Secretariat for a full presentation on the 'Sandbox Approach' and the Evoke-case



Why a WBG 'Sandbox Approach'?

Rationale

- Promoting and mainstreaming **innovation across the WBG** by leveraging DTs
- Allowing a temporary **flexibility in procedures** in particular areas, such as legal and procurement, so experimentation can occur freely (WBG IEG, 2020)
- Affording staff the **psychological safety** to innovate, take circulated risks, and fail without fear of repercussion (WBG IEG, 2020)
- “Real life” piloting allowing new approaches to be implemented in different country contexts to **enable innovation to be scaled quickly** (Watkins 2018b; WBG IEG Report 2020)
- Benefiting from **Exploration Sandbox** Approach to identify challenges and mitigation of risks associated with DTs (WBG ITS Technology and Innovation Lab, 2020)
- Providing for an iterative process to leverage innovative methodologies, such as design thinking, systems thinking and **foresight approach** to capture, translate trends, drivers & signals of change; shape strategies, design future ready interventions; and assess and frame opportunities for multilateral use of DTs (WBG ITS Technology and Innovation Lab, 2020)
- Enhancing **collaborative approach with multidisciplinary teams** (data engineers, sector domain experts, legal counsel, communication specialists, design thinkers, procurement specialists, etc.)



Why a WBG 'Sandbox Approach'?

Existing barriers to innovation

- WBG operational projects leveraging emerging technologies face **risks** and **uncertainties** in their implementation phase
- Legal, procurement and external relations **lack precedents** to provide guidance and **support to first-time initiatives** (WBG IEG, 2020)
- Recurrent implementation **procurement constraints and risk-averse culture** in Disruptive Technologies (DTs) related projects (WBG IEG, 2020)
- Lack of sufficient institutional incentives for **risk-taking and innovation** (WBG IEG, 2020)
- Without adequate tools and procedures to implement emerging technologies, it remains challenging to ensure **scalability and impact**



'Sandbox Approach' Roadmap - Decision Process Overview

Rationale for 'Sandbox approach' within WBG

Step 1 The **Novel Solution** potential to be mainstreamed across the WBG Operations

Is this **"Real life" piloting** aiming to implement new technologies in different country contexts?

Is the strategy to have more **psychological safety** to innovate and take risks?

Is the strategy to reduce **legal/procurement** barriers (e.g., data/IP issues)?

Is the strategy to identify **barriers, challenges and benefits** with DTs?

Yes

Step 2 Identify specific **barriers to implement** new technology/-ies

Existing **legal/procurement frameworks/procedures and country's technology infrastructure (legacy-heavy or immature)** that **prevent or create uncertainty** to test or implement

A lack of precedents to provide guidance and **support to first-time initiatives**

(cont.)

Step 3 **Testing** new technology(-ies)

Does the new technology promise **significant benefits**?

Is **live testing/simulation** necessary?

Yes

SANDBOX

Can these challenges be **resolved** with rule/procedure update or clarification?

No

Yes

Rule or policy update by WBG

