**Terms of Reference**

**Internship with the World Bank Agriculture and Food Global Practice, Data-Driven and Digital Agriculture (DDDAg) Team**

**Background**

The Data-Driven Digital Agriculture (DDDAg) Team, in the Global Engagement Unit of the Agriculture and Food Global Practice, leads the global analytical and advisory work on data driven digital agriculture at the Work Bank.

Digital Agriculture (DA) is a catalyst with wide-ranging potential to transform food systems and affect the lives of billions. Digital technologies dramatically change the interactions between the unparalleled number of actors across the food system, comprising farmers, upstream and downstream enterprises, consumers, and public sector institutions. With a growing two-thirds of the world population having a mobile subscription and nearly half using the internet, digital technologies can offer the 570 million farmers worldwide solutions to make more precise decisions on labor, capital, and natural resource management, lower the costs of linking them to the upstream and downstream markets, increase transparency of agricultural value chains through improved access to information and product traceability, and enhance the knowledge of the world’s 7.5 billion consumers on food choice aspects such as price, nutrition, production practices, climate change and environmental impacts.

The role of public sector is to maximize societal gains of improved efficiency, equity and environmental sustainability that stem from the adoption of digital agriculture, while mitigating the potential risks. Supply and use of digital technologies in agri-food systems is fundamentally a private sector activity, driven by private gains of the profit-maximizing producers and utility-maximizing consumers. However, often private economic agents may not have the right set of incentives to make rational decisions due to the existing market or policy failures, lack of public good provision, or their bounded rationality (i.e. not having enough information about the choice options and the impacts of their decisions). Some characteristics of the digital goods may also make it more challenging for private sector to supply and use digital technologies in agricultural sector. In such cases, the entry point for public policy is to influence the incentives and decisions of private agents with the goal of maximizing efficiency gains at the societal level. In addition, the role of public sector is to maximize the societal gains that stem from the adoption of digital agriculture but may not be fully internalized by private economic agents, such as equity and environmental sustainability. The latter consists of creating a set of incentives to prompt a certain behavior among private economic agents with the goal of maximizing the societal benefits, while also mitigating potential (and sometimes unknown) risks that digital agriculture may bring.

**Objective**

The DDDAg team is looking for support for one of its priority areas **investigating national Agriculture and Food data and innovation ecosystems and producing knowledge and learning content for a Open Learning Campus course offering on Data-Driven and Digital Agriculture.**

A foundational underpinning for a successful AgTech sector is the availability and access to data across the Agriculture and Food sector. This can inform where market failures are occurring, support on-farm productivity improvements, catalyze innovation and entrepreneurship, enable food product traceability, and incentivize environmental sustainability. Without high quality, reliable and accessible data, it can be hard to unlock the transformative potential of digital agriculture.

Hence an objective of this priority area is to develop knowledge about best practices, policies and practical recommendations to create effective national data ecosystems for the Agriculture and Food sector. An effective ecosystem will incorporate multiple stakeholders, including governments, private sector players, entrepreneurs and startups, farmers, and international organizations, given the need to support data collection and access from public and private sources.

The goal of this internship would be to document what can be learned from the Korean experience or other country experience on supporting such national data and innovation ecosystems, in terms of investments, institutional set-up, organizational frameworks, policies and practices (codes of conduct, industry norms) to create the right incentives to different stakeholders and appropriate data governance arrangements. Based on the intern’s time available and interest, the task could be extended to compare and contrast the Korean experience to other countries in the region.

DDDAg has an active knowledge and learning agenda. The team is developing a Korea-WB Digital Agriculture e-learning course that will disseminate knowledge and information gathered through innovation landscape studies and knowledge generated through the existing What’s Cooking series. The e-learning is structured start to finish course covering all aspects of technology and digital innovations across the agri-food value chain and how-to implement solutions. The e-learning course will be available on the World Bank’s Open Learning Campus (OLC). In addition, DDDAg team design and organize learning sessions during the Annual Agriculture and Food Forum.

**Tasks:**

The DDDAg team is looking for interns to:

* Design and produce e-learning content for the OLC on DDDAg themes
* Research and develop Innovation case studies
* Assist in organizing weekly DDDAg webinars
* Help on designing and producing content for the Annual Agriculture and Food Forum.
* Research relevant documentation about the Government of Korea’s and any other country strategies and policies to develop and strengthen its own Agriculture and Food data ecosystem
* Review and document strategies by other stakeholders to influence data collection, sharing and governance
* Conduct interviews with relevant stakeholders to document lessons learned and what factors are important to different stakeholders
* Produce a synthesis note and compiling findings
* Convert the synthesis not into a presentation with visuals
* Present the synthesis note internally to the World Bank team and potentially to external parties
* Support the coordination of meetings between the World Bank and Korean stakeholders
* Based on time permitting and duration of internship, extend this analysis to a comparison of lessons learned from Korea to those from other countries in the region
* Establishing linkage with Korea public and private sectors agencies working in agriculture and food systems and helping the DDDAg team in organizing learning events and webinar
* Help the team in creating social media content

**Duration of the Internship:**

The internship will run six months from the start date. During the first three months the intern will focus on the data and innovation ecosystem activities outlined above and during the latter three months the focus will switch to innovation ecosystem activities, for which an updated set of ToR will be provided.

**Desired skills and qualifications:**

* Preferably an undergraduate degree in Economics, Agronomics, Public Policy, Law, Data Science or related discipline or at least enrolled and pursuing one; a cross-disciplinary background in both data or digital technologies (for example, computer or data science) and public policy would be highly valued
* Interest in the Agriculture and Food sector; background studies and experience on this is desirable;
* Interest in data and digital innovations; background studies and experience on this is desirable;
* Interest in public policy, particularly on data governance would be valuable;
* Ability to write and communicate confidently in English;
* Interest and knowledge in policy environment in other countries also helpful; as would ability to speak language of these other countries

**Financial Compensation**

Intern will receive a grant from the Korea FAO Association for the six-months duration of internship under the Overseas Agricultural Sector Intern Scholarship (OASIS) Program hosted by the Ministry of Agriculture, Food and Rural Affairs (MAFRA), Republic of Korea.

**Reporting**

Intern will work closely with DDDAg team and report to Parmesh Shah, Global Lead, Data-driven Digital Agriculture.

**Office Space**

While the intern will work remotely, DDDAg team will coordinate with colleagues in World Bank Korea country office in Seoul to find an office space, at least for some days in a week, subject to availability.