



Korean Ministry Blockchain
Initiative

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On June 21st, the South Korean Ministry of Science and ICT announced a development strategy for blockchain technology that aims to raise 230 billion won by 2022.¹

The Ministry of Information and Communication said, “We will establish a roadmap for developing a block chain technology and plan to secure 90% of the technology level by 2022 compared to the world’s top countries. We will invest 10 billion Won from next year to next year, we plan to pursue a medium and long-term plan for expanding the blockchain service technology.”

As part of this effort, the Ministry introduced an initiative to expand and develop six existing blockchain pilot solutions.²

The following report highlights current news related to this initiative, while further illustrating the competitive environment for blockchain solutions across six verticals.

1. Management of Livestock Records

The first project is a livestock record management solution. With this solution, the Ministry aims to shorten the information follow-up period for livestock data from up to 6 days to less than 10 minutes in the case of a problem. It uses blockchain technology to share the information of each stage in the process from breeding to slaughtering and sales.

On July 17, Blockchain and IoT project Waltonchain signed a partnership agreement with Korea Food and Livestock Promotion Center. As of yet, no further information has been released regarding the pilot project.³

According to PWC, Food fraud is estimated to cost the global food industry \$40 billion each year.⁴ Additionally, foodborne diseases in the US alone are estimated to have an annual cost of \$55 billion.⁵ It will be interesting to see which blockchain service providers step up to solve these major problems, especially in Korea, which has proven to be one of the first countries to pursue adoption of blockchain solutions.

2. Customs Clearance

The second project launched by the ministry is an effort to streamline the customs clearance process for Korean e-commerce, shipping, and courier companies. Using this solution, orders, shipments, deliveries and clearance will all be recorded on a blockchain.

¹ <https://thenews.asia/en/2018/06/21/korean-government-to-invest-230-billion-won-in-blockchain-technology/>

² <https://www.coindesk.com/korean-government-lead-6-blockchain-pilots-9-million-fund/>

³ <https://twitter.com/Waltonchain/status/1019156150623748098>

⁴ PWC. 2016. “Food Fraud Vulnerability Assessment and Mitigation: Are you doing enough to prevent food fraud?” www.careers.pwccn.com/webmedia/doc/636160304675611808_fsis_food_fraud_nov2016.pdf.

⁵ Scharff, R.L. 2015. “State Estimates for the Annual Cost of Foodborne Illness.” *Journal of Food Protection*: June 2015, Vol. 78 no. 6: 1064–1071.

Korean blockchain solutions provider ICONLoop appears to be participating in this initiative. An article by helloiconworld states:

On May 28th, the Korea Customs Service and eight other organizations including Nomad Connection, Matrix2b, CJ Korea Express, and Lotte Global Logistics signed an MOU with the goal of launching a pilot project by the end of the year. KCS plans to apply blockchain technology to all e-commerce import and export services shortly after.⁶

It also appears that tech-consulting company Samsung SDS may be participating in a similar initiative. On September 14, Samsung SDS signed an MOU with the Korean Customs Service and forty-eight domestic institutions to implement a blockchain solution for the shipping industry, using its Nexledger solution for the new platform.⁷

IBM estimates that going digital can save shipping carriers \$38 billion annually. IBM has pursued its own blockchain initiative, partnered with Maersk. Using hyperledger fabric, IBM plans to track 10 million shipping containers by year-end.⁸

3. Easy Real Estate

Real estate transactions are conducted with the Ministry of Land, Transport and Maritime Affairs. The proposed pilot project will use blockchain technology to provide a one-stop service for real estate business by linking together the court, the National Tax Service, resident center, real estate comprehensive study system, and Korea Fair Trade Commission.⁹

As of yet, it has not been announced who will be the blockchain technology provider for this initiative.

4. Online Voting

The fourth pilot project is for an online voting solution using blockchain technology for authentication.

According to the Ministry, "online voting by voters is recorded in the blockchain, ... in which stakeholders such as candidates and observers verify the voting process."¹⁰

ICONLoop was recently chosen by the Seoul Metropolitan Government to develop a voting platform, as part of the Seoul Blockchain Standard Platform.¹¹ It will be interesting to see whether this voting solution will extend to other major cities in Korea.

5. Electronic Document Distribution

⁶ <https://medium.com/helloiconworld/loopchain-technology-to-be-applied-to-import-customs-clearance-procedure-for-the-korea-customs-9a7572b3c484>

⁷ https://www.samsungsds.com/global/ko/about/news/Blockchain_Nexledger.html

⁸ <https://www.hyperledger.org/news/2017/03/04/3-4-17-international-business-times-maersk-and-ibm-aim-to-get-10-million-shipping-containers-onto-global-supply-blockchain-by-year-end>

⁹ <https://www.coindesk.com/korean-government-lead-6-blockchain-pilots-9-million-fund/>

¹⁰ <https://www.coindesk.com/korean-government-lead-6-blockchain-pilots-9-million-fund/>

¹¹ <https://medium.com/helloiconworld/loopchain-demonstrated-to-seoul-blockchain-platform-1cdfd705285b>

The fifth pilot project is related to electronic document distribution. There has been little publicly released information about this project, however, it seems probable that ICONLoop is involved, given their current partnership with Chain2B and connections to other government-backed projects.

ICONLoop and Chain2B have been working together on a blockchain-based document management platform since December 2017.¹² It will be interesting to hear more developments about this project, especially because ICONLoop is also working on ChainSign, a platform for contract management, which might also be of use for this project.

6. Marine Logistics



Samsung SDS will be working with the Korean Government on developing the marine logistics solutions.¹³ They have partnered up with the Ocean Shipping Logistics Blockchain Consortium to streamline data flow for the shipping industry. Findings from the first Proof of Concept report that processes have been successfully digitized, confirmation processes have been automated, and smart contracts are also on the way.¹⁴

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Note: This report was put together with the information available as of September 10, 2018. As more information is released, the content within this article may need significant change.

This report was put together for HX57 ICON Research Week.

¹² <https://medium.com/helloiconworld/icon-theloop-and-chaintob-partnership-7b3fdce4483>

¹³ https://www.unescap.org/sites/default/files/Session%20IOT%20and%20Blockchain_Baek.pdf

¹⁴ <http://www.koreaherald.com/view.php?ud=20171221000825>