

Executive summary - TechXHIBIT (DEVCON '18)



SmartRATION

Team Members-

Avik Jain *, Harsh Gupta *, Ankit Verma*

*B.Tech – CSE with splz. in Cloud computing | expected 2020 | UPES, Dehradun

e-mail - 500053088@stu.upes.ac.in

contact – 9140071959 , 8006528814 , 7905672633

Our Product

SmartRation is a project whose development aims to make the Food Distribution System in India , smart ,tamper-proof and insightful(with heuristical analysis) to the core.

The project is powered by Blockchain technology ,which would run on cloud.

Our Objective

- To provide a **tamper-proof solution of in-taking the grains produced by farmers , storing it in warehouses and delivering it to the needy through ration stores** in India.
- To provide an analysis of and monitoring of Government run Intake Stores ,to reduce **adulteration** of food grains and **inflation** of prices based on illegal stocking of material by middle men.
- To run this process as a business plan so as to work upon a **scalable architecture** which can run as **one fit for all sizes** based cloud model, for various supply chain markets.
- To **index the production capabilities of farmers** and **reduce the no. of suicides committed** by them , by providing compensations and low rated loans as well as best prices for their produce.
- To **reduce inflation and adulteration in food provided at ration centres and map public concerns regarding ration store contractors.**

Mission and Vision

The sole mission of SmartRATION is to create ultimate transparency and corruption free end to end delivery model which is regulated and profitable for all participant organisations ,but at the core it serves as an effort to bring food storage and regulatory standards in a massive economy like INDIA.

India is still an Agriculture based economy and by this project we will be able to strengthen and detain the economic foundation of India **from corrupt loopholes** to a visible standard of transparency and robustness.

The vision of the SmartRATION is to start as a **boot camp** and transform itself into a **fully scalable service oriented enterprise solution** which can align itself and fulfils the needs of **Smart and Transparent future business and governance**.

The vision is to **provide the most insightful yet affordable and competitive business plan** which can be used by business houses of any scales.

Target Market Space

The initial target market space of SmartRATION is the Government of INDIA . We would like to solve and provide the fiscal plans for the food grains produced by the farmers and the way it is being stored and redistributed across the country of such massive population and mixed bag of needs.

If we are able to work with efficient growth and meeting objectives we can model our solution and serve it as a business plan for a plethora of industries and organisations of varied market spaces.

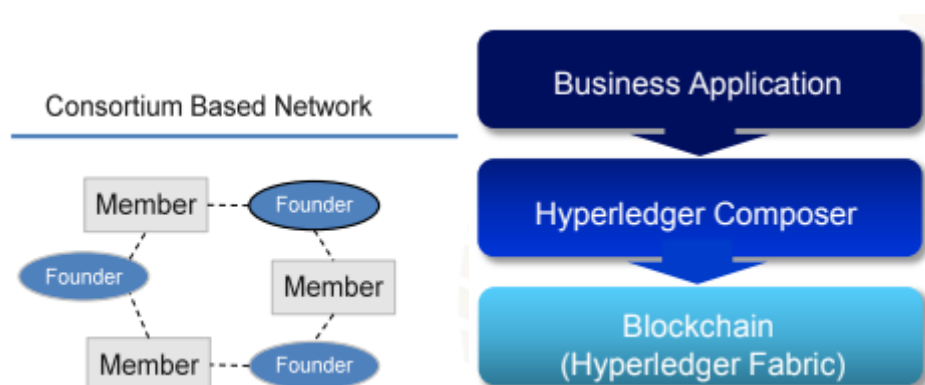
For example, a **peer to peer retail system** using Blockchain and cloud.

Work done till date

We essentially are undergraduates who are novice to cloud , blockchain , machine learning and data science.

But we are highly aspirational ,and are trying to consolidate all the above technologies to provide a great solution that aims at the betterment of more than 50-60 % of population in India which consist of lower middle class and BPL sections of society.

Having said so we have a mature level of knowledge about the technology we are working upon. We have learnt the underlying methodology of **permissioned blockchain system** via NPTEL course running on BLOCKCHAIN and have implemented the **hyperledger fabric v1.0 which includes consensus,shared ledger and smart contract** on IBM cloud as part of learning curve.



We are still learning the advanced structures and research inferred solutions to make our Business Plan more robust.

We have recognised the plausible actors and assets for our tech solution which will be a web based application used by a varied sub organisations and will be regulated by the policies established by Government of India.

We are now aiming to develop a business model, funding models and full project software lifecycle.

On current date we are building our product demo version 1.10.

The next LEAP

We are evangelists looking for platforms to pitch in our IDEA for providing transparency ,the SmartRATION.

We are determined to upskill ourselves each day and fabricate the best solution, by DESIGN THINKING process.

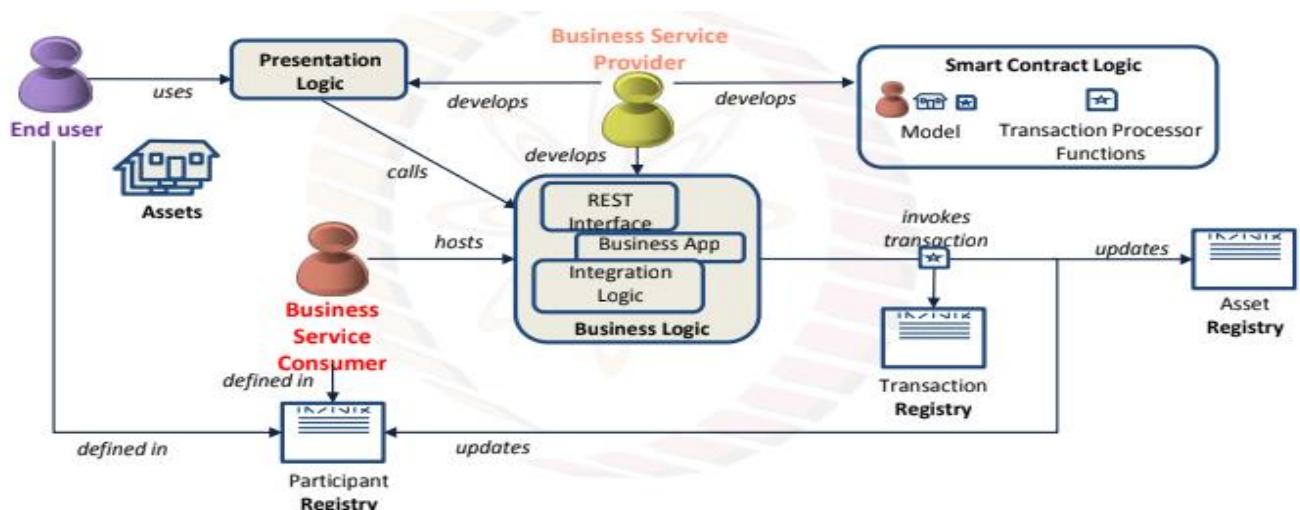
We are focused to make a disrupt in the supply chain business, and coherently involved other blockchain based systems which can use the analytics, A.I. ,Big data and that necessarily is decentralised and cloud based.

Our success will lie in the information processing and smart analytics we will provide as a stack over the blockchain based solution.

We have a zeal to put perspiration in our actions and need mentorship, guidance and tech support to make this IDEA a reality. For betterment of millennials of all sections of society.

The technology we are going to use-

- Private and Community based CLOUD
- Consensus and Smart contract based Blockchain hyperledger.
- Analytics and heuristics on fiscal data collected by Big data and Data Science services.
- NODE.js
- Python and web APIs.



ACTORS in above framework-

- farmers who sell their grains to government buying outlets at district level.
- government storage houses and the transport facilitators from buying outlet to storage areas
- a core business logic over hyperledger fabric.
- ration store dealers in smart contract with government (based on their service efficiencies as per public response in their area)
- end public users who can see from where their grains came from.
- the government policy makers and monitoring authorities who are going to establish smart contracts and regulate prices based on the various impromptu parameters.

MVP repositories-

<https://github.com/mercurial-harsh/SmartRATION>

<https://github.com/Avik-Jain/SmartRATION>