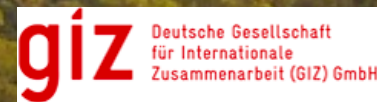




# Enterprise Blockchain Tech Project “TrueCrop”



# What is the context?

- The digital platform “TrueCrop” supports GIZ in the project “*Global Initiative for Access to Insurance*”, within the cotton production and supply chain in India and Zambia. In the scope of this project GIZ pilots together with local partners a Blockchain-based solution, designed to ensure traceability and incentivize good agricultural practices (GAP), manage risks at farm level and enable a sustainable insurance business model for farmers.

See more:

<https://www.giz.de/de/mediathek/78035.html>

<https://www.nachhaltige-agrarlieferketten.org/en/news-events/securing-incomes-through-smart-farming-and-traceability/>

- The central objective of the partnership is to enable more timely and reliable post-disaster response and to better prepare for climate and disaster risk using climate and disaster risk finance and insurance solutions, reducing humanitarian impacts, helping poor and vulnerable people recover more quickly, increasing local adaptive capacity and strengthening local resilience.
- dCentra – technical service provider - has developed the blockchain platform supporting the project (Name: “TrueCrop”). The developed source code is open source under MIT license.
- WRMS – local Indian partner – was providing know-how and initial data for the PoC, documenting the agricultural practices, the harvesting and the transport of goods – supply chain transparency.



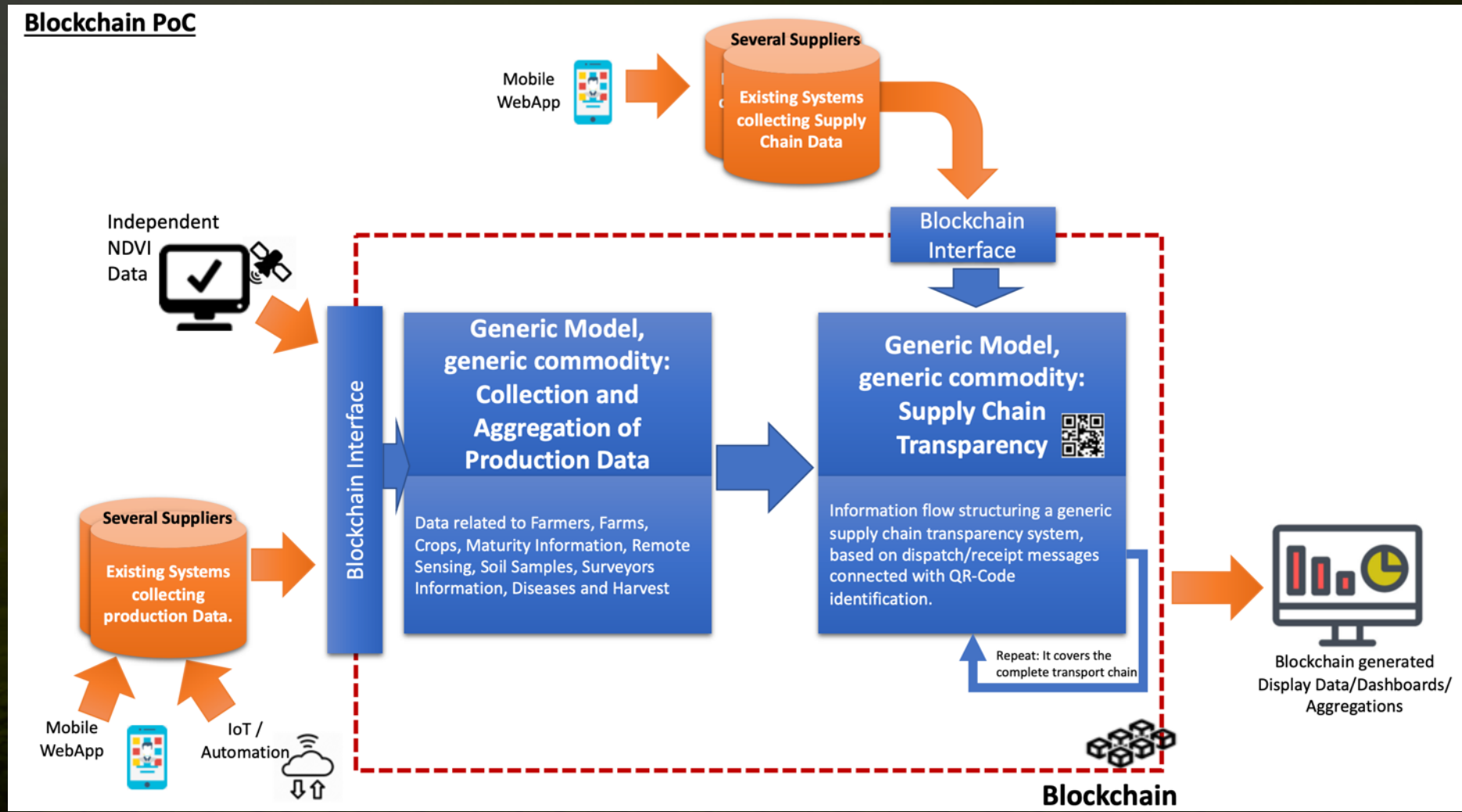
# What has been achieved?

- A generic blockchain implementation has been realized, capable to document the production and cover the complete supply chain of practically any commodity in any location. It can be used as an implementation blueprint, a base for same use cases - can be easily adapted to apply to related business models.
- It is covering
  - collection and aggregation of production data (maturity and harvesting).
  - supply chain transparency for crop transportation.
- The system is built following requirements and existing practices, communicated by an active authority in the field, based on existing know how – local service providers were involved in the design of the system – existing know how has been used.
- The collection of data provide inclusion of independent data sources, like surveyors on the field and satellite NDVI information.
- Provide a display/dashboard functionality for visualizing the aggregated production data and information related to the supply chain and transport. This information is retrieved only from the blockchain.
- This current running project is covering cotton production and supply chain transparency from several Indian regions.
- The infrastructure has been operated in Germany/Frankfurt and in India/Mumbai.
- The complete source code and realized materials are open sourced.



# The UseCase

## Blockchain Connector & Smart Contract Logic



# TrueCrop Screenshots

The web application displaying the data

(production, harvesting and transport – supply chain)

The screenshot displays the dCentra web application interface. At the top, the logo 'dCentra' is visible with the tagline 'DECENTRALIZE THE WORLD'. Below it, the navigation path is 'TrueCrop / Crops / Cotton'. The main content area is divided into two sections: a table titled 'Farmers' and a map.

The 'Farmers' table has three columns: 'ID', 'Farms', and 'Docs'. It contains 16 rows of data:

ID	Farms	Docs
1	4	4
2	3	3
3	3	3
4	3	3
5	3	3
6	3	3
7	3	3
8	3	3
9	3	3
10	3	3
11	3	3
12	3	3
13	3	3
14	3	3
15	3	3
16	2	2

The map on the right shows the Punjab region in India, with various cities and districts labeled. A blue circle with the number '3' is centered over Sri Ganganaga, and a yellow circle with the number '84' is centered over Sirsa. The map also shows the borders of Himachal Pradesh, Chandigarh, and Delhi.

Detailed view of the information related to the production of a crop and a specific farmer (seen as a timeline, as information is provided by multiple sources).

