ICT for Smart Agricultural Markets and Value Chains.

DR. B. K. SINGH | BKC WeatherSys Pvt. Ltd.
India
ICT for Smart Agricultural Markets and Value Chains.

Fasal Salah is an example of ICT with reference to “Smart Agriculture“:

- Fasal Salah provides most information farmers need to have

- WeatherSys as a meteorological firm has endeavored to Geo-locate. Farmers, Weather, Market input output on one paltform
What value chain is all about?

A ‘value chain’ in agriculture describes the range of activities and set of actors that bring agricultural product from production in the field to final consumption, wherein at each stage value is added to the product.
A simple value chain

Pre-production
- Agro inputs: seeds, fertilizers
- Tillage operations

Production
- Harvest

Post production
- Direct sales
- Market manufacturers
- Food & product preservation
- Food & product packaging

Industrial processing

Transportation
Fasal Salah is an agro advisory path breaking app that provides highly personalized farmer specific crop weather advisories for Indian farmers. This is the first application that provides real-time location specific, crop specific, weather-based agro advisories across India. Developed for the Indian farmers.
Home page of “Fasal Salah”.

Advisory - In run rime
News
Nearby input shops
Mandi Rates Live
Weather forecast for own village
Feed back proviosion
National Weather
Crop Pictures - Insurance
Advisories start 15 days before sowing and go up to 20 days post harvest

Date of actual sowing inserted by farmers

Automatic generation and transmission of advisories in good time

Getting weather alerts 7 days in advance
Hyderabad, Telangana
17 जनवरी, 2018

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वर्षा: बारिश नहीं

तापमान:

धूपतम: 16°C
धिर्गतम: 33°C

आर्दरता

मूलतम: 79%
धिर्गतम: 81%

हवा: 7 किमी/घंटा

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Hyderabad, Telangana
18 जनवरी, 2018

वर्षा: बारिश नहीं

तापमान:

धूपतम: 15°C
धिर्गतम: 31°C

आर्दरता

मूलतम: 30%
धिर्गतम: 74%

हवा: 9 किमी/घंटा

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Hyderabad, Telangana
19 जनवरी, 2018

वर्षा: बारिश नहीं

तापमान:

धूपतम: 15°C
धिर्गतम: 31°C

आर्दरता

मूलतम: 25%
धिर्गतम: 50%

हवा: 9 किमी/घंटा


Hyderabad, Telangana
20 जनवरी, 2018

वर्षा: बारिश नहीं
तापमान:
न्यूनतम: 14°C
अधिकतम: 31°C
आईटा:
न्यूनतम: 18%
अधिकतम: 44%
हवा: 9 किमी/घंटा

Hyderabad, Telangana
21 जनवरी, 2018

वर्षा: बारिश नहीं
तापमान:
न्यूनतम: 13°C
अधिकतम: 31°C
आईटा:
न्यूनतम: 16%
अधिकतम: 55%
हवा: 8 किमी/घंटा

Hyderabad, Telangana
22 जनवरी, 2018

वर्षा: बारिश नहीं
तापमान:
न्यूनतम: 14°C
अधिकतम: 31°C
आईटा:
न्यूनतम: 18%
अधिकतम: 54%
हवा: 9 किमी/घंटा
Fasal Salah Incorporates Various other facilities for benefit of farmers.
Risk Management Plan

Risk | Probability | Impact | Owner | Mitigation Plan
--- | --- | --- | --- | ---
Budget cuts | may reduce staff, affecting project scope and schedule | Medium | High | Project Manager | See appendix for a phased implementation plan

Crops Covered

20+ major commercial crops including fruits & vegetables.
WeatherSys Value Proposition

**WEATHER**
- Rainfall Prediction
- Extreme Weather
- Seasonal Forecasts

**CROP SCIENCE**
- Agronomy
- Soil
- Variety
- Management

**GIS Platform**

**Actionable Information**
Our Intelligent Agriculture Platform - metGIS AGRO
Delivers Timely & Personalized Content to Individual Farmers
Implementing Geo informatics:

- Our app “Fasal Salah” is a geo informatics based application
- Each Farmer is Geo Located and directly connected
- All Weather Parameters are Geo-located
- Commodities, Mandis and Prices are Geo located
- Aggregation Analysis possible on Taluk, District State or national Lavel
How Fasal Salah Could be used in value chain:

- Farmers
- Whole sellers
- Promotion of Various Schemes independently
  - Crop insurances
  - Central and State schemes
  - Input suppliers
  - Advisors
  - Transport and Logistics
Crop yield estimation
GCC, GLCM, NDVI, Sobel, Antrophy
Our agriculture website shows live data of crop health across India, 7 days weather forecasts, Live Mandi Data, and news. Agricultural News can be customized.
Applying Geo Informatics through our USP

• **BKC WeatherSys Pvt. Ltd.** is one of India’s first private sector meteorology and environmental technology companies.

• Founded in 1989, we were appointed **System Administrator by NASA** for 5 years for an Indo-US Satellite Data Exchange Centre. This collaboration sparked the beginning of scientific partnerships with world experts and the genesis of the private sector weather industry in India.

• WeatherSys was the first entity to provide 7 day forecasts for India and customize it for print and news media (Spun-off as Skymet in 2011).

• Headquartered in a 30,000 sq. ft. facility in Noida, Uttar Pradesh, India, BKC WeatherSys employs ~50 engineers, meteorologists and support staff.
BKC Weathersys utilizing ICT:

- We understand weather: we understand Agriculture

A 25 year old Knowledge-based Company

Weather Monitoring
- Turnkey installations & support of Weather Monitoring Systems and devices including radars & satellite data reception systems, including devices for climate resilient agriculture

Software Development
- Customized software for meteorology and development of systems for met data reception, analysis and visualization, including GIS Systems (IMD, IAF, Navy, DRDO)

Weather Forecasting
- Customized Operational Weather Data to print, electronics and end users in Energy, Oil & Agro sectors. (Spun-off in 2011 as Skymet Pvt. Ltd)

ISO 9001:2008 Certified by DNV and NABCB (QMS 001) for Design, Development, Supply & Installation of IT Enabled Turn Key Solutions including software related to Meteorological & Environmental requirements
Core Software Offerings

*Software developed in-house at BKC*

**metGIS**
Forecasting Workstation
- Automated reception of satellite images and data from multiple sources, including models
- Advanced image processing and editing tools to generate forecasts for variety of applications
- Used by the Indian Air Force

**MAUSAM**
(AWS Integration)
- [Text]
- Integration and decoding of measured weather and atmospheric parameters from automated weather stations
- Rich visualization and analysis interface

**Agro-Weather**
Real Time
- [Text]
- Automated crop weather (current and forecast) for all major commercial crops in India
- Real-time commodity market prices and market (mandi) arrivals information
- View demo on Weatherindia.net

**Seismic Graph Reader**
- Software for digitizing seismic graphs.
- Searchable database generation that includes time points and curvature
- Pilot for Bhabha Atomic Research Centre

Integrated Systems since 1990