INTERNATIONAL JOURNAL
FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Online Farmer Fest Based on SOA: A Review

Bhanupratap Yadav[1], Md. Shoyab Sheikh[2], Sohail Akhter[3], Tushar Moon[4], Prof. Kunal Purohit[5]

[1, 2, 3, 4, 5] *Computer Science & Engineering, Nagpur Institute of Technology, Nagpur, India*

Abstract: In Present world information and communication technology (ICT) is a key structure for economic development. Presently India is 121st position in ICT Development Rankings out of total 157 countries. The development of information technology in agricultural organizations and easier and cheaper access to it enables the development of electronic relationships with customers (e-CRM) which simplify and automates the communication with customers and provides an answer to their requests in real time, which leads to increase of customer loyalty and satisfaction. This business strategy helps agricultural organizations to adapt their products and services for each client. E-commerce has had a tangible impact on the way business is conducted and the structure of markets. Growing smartphone penetration in the rural regions of India is encouraging the growth of m-commerce models to focus on agribusiness. Such a scenario can revolutionize the Indian agriculture. Almost all the farmers now own a mobile phone out of which 40% are smartphones with internet connections. This highly potential reach, if properly guided can bring about modernization in the buying of agriculture inputs by the farmers. The analysis was conducted on the example of Nagpur, which is a city with a specific structure of the agricultural market. It is shown that the development of E-commerce in agribusiness is at an early stage of development and at the same time is a process of evolutionary changes. In this paper, we report on the design and implementation of a service-oriented approach for web-based E-commerce agricultural business. E-agriculture is a stage for supporting marketing of agricultural products.
Keywords: Agriculture, ICT, e-commerce, agribusiness, smartphone, online shopping, Service Oriented Architecture(SOA), web application.

I. INTRODUCTION

In Agriculture a service-oriented architecture environments, a service can be thought of as a software product that offers a solution to satisfy the customer's or buyers and sellers as Farmer needs. However, multiple service composition associated with a web application, which is emerging to provide multiple functions by dynamically depending upon individual distributed services to work together, introduces new concerns. Previous Systems research on web applications has focused mainly on technology for improving communication discovery, performance, and productivity. Now, with the features of service-oriented architecture (SOA), web applications can be offered in SOA environments as services. Agriculture has been contributing towards the Gross domestic product of the country's economy, but this number can be increased by intensive achievement driving growth and welfare to the farmers by serving them better. Farmers are being provided with knowledge-based information through various Toll-Free numbers, internet sites, mobile apps, and other means. Farmers' Portal, m-Kisan Portal and Kisan Call Centers (KCC) are some platforms currently active in India. Specific and seasonal advisories are being provided upon registration on mobiles through SMS in the farmer's local languages. The information includes market prices, seasonal pests and their control measures, weather reports etc. Vidarbha is a popular vegetable and grain growing area in Maharashtra. Cultivation of these crops involves usage of seeds, plant protection chemicals, nutrients, plant growth regulators, and anti-transparent. The purchase of such inputs involves the farmers identifying the problem in the field, taking the plant sample with the visible symptom to the nearest dealer shop (present in the town) and consulting the dealer for the solution of the problem. The dealer recommends the chemical which is available in his shop and most of the products have higher margins.

II. PROBLEM STATEMENT

While farm suicides have occurred in many States, nearly 70% of these deaths are only in five States where just a third of the country's population lives. This means that farmer's suicide problem occurred in those regions with shocking intensity. Maharashtra, for which data exists from 1995, is by far the worst state in the country. Farm suicides there have increased from 1995 to 2010 and still goes on. The use of ICT, India's food production, and productivity has been increased for agricultural purposes. The developed nations are using the technology of laser in place of tractors to (plough) to break and turn over earth especially with plotlands. The problem arises here is that Indian farmers cannot pay for this technology. Now a day addition, power or energy, and electricity also cause a major problem for Indian farmers and choice of power like solar force panels, keeping up and modified by ICT.

III. LITERATURE REVIEW

Kittur Nazhat, Rajendra Jain, and Parveen Kittur [3] has proposed system as The research led to the conclusion that a sustainable m-commerce platform for the sale of agri inputs partnership, media mix, innovation, simplicity, timeliness, quality, and credibility. ICT in agriculture has just been developing quickly in the Kolar area. Agricultural m can gain speed by creating more awareness and educating the farmers. The challenge of logistics can be solved by partnering with the major dealer who is locally available. The construction of m-commerce platform for agriculture is the only way to open the market.

Santosh Gaikwad, Snehal Chaudhari, Bharti Deore and Swapnil Adhav [9] has proposed system as Based on the results obtained from the over, the following conclusions were prepared: Majority of farmers in the condition or country is not aware that mobile phones can be used to conduct businesses and collect information. Mobile phone costs should be lower to enable the majority of farmers for having access to the current information about agribusiness within the state or country. E-Agriculture has not been implemented because farmers in the country have not been sensitized to it & young farmers were in lack of information about the agriculture such that e-agriculture might provide them useful information's regarding the plantations that they have grown. The government should also carry out sensitization to create awareness for the farmers on how best they can use information technologies to conduct agribusiness. Illiteracy among farmers in the understanding message is also another factor that pertains the usage of technology in agriculture, to overcome this it is necessary to create awareness of learning the state language such that the notes send will be in the state language.

Nidhi Dwivedy [10] has proposed as Decision Support Systems for is more important and usually, avoids risk developing environments. It has been suggested that the WTO is stipulating reductions for export subsidies on farm products will make Indian exports more competitive. It has been estimated that the export potential may increase up to $ 1.5 billion by 2020. The advantage of the emerging order is that the Indian farmer needs to be equipped with information that has been facilitated by undertaking a proper SWOT analysis and its comparison may lead to conventional wisdom and satisfy himself on an appropriate course of action. The Available information does not satisfy which projects on the weaknesses of the adverse effect of WTO on any specific agricultural product will help in taking the necessary corrective measures. In the present scenario, the competitive advantage is necessarily required to be fully exploited for increasing the export potential.

NA XU, SUPING PENG, AND ZHANGANG WANG [12] proposed system as Service composition has emerged to allow multiple functions, fine granularity, and fast access to applications. In addition, service composition can be invoked any time on the web so as to facilitate easier, faster, and much more cost-effective rebuilding. Hence, a need emerged for the development of a geodata service composition web application. The main contribution of our paper is to describe the design and implementation of a geodata service composition web application based on service-oriented architecture. Service semantics is used for describing geodata service composition to align the technology environment with its business process. Service processes can be modeled as service nets using Petri nets; thus Petri nets were chosen to model the geodata service composition, and its structural analysis techniques were used to verify deadlock. Finally, the implementation architecture of a geodata service composition web application has been proposed and implemented. We believe that this contribution is theoretically and practically relevant because of the advantages offered by service composition web applications for geodata applications, including cost-effectiveness, ease of use, flexibility, reusability, and ease of deployment.

IV. CURRENT SCENARIO

The agriculture sector in India is currently facing a not easy phase till present. India is moving towards an agriculture emergency due to inadequate investment in irrigational and agriculture infrastructure, poor attention, not effective land management, non-given of fair prices to farmers for their crops and insufficient land reform in India, etc. Food production and product development in India are declining while its food consumption is increasing. The situation has further been making or become worse due to use of food grains because of demand for biofuels. As India does not have logistical systems for large-scale food import, the resolution of import of food grains would be complicated. Also, the present market scenario poor for selling a product with farmer's expectation to make more money.

V. PROPOSED SYSTEM

For improving or developing agricultural productivity an expert [8] [9] [10] agricultural advice is given to the farmers both in timely and personalized situations. Here, in this system agricultural experts generate the advice by using the modern agriculture which is highly knowledge-intensive which also requires timely, reliable and accurate information on natural resource and their usage patterns at present and future technology available for their utilization and other information about markets, weather, insurance,

subsidy, etc. to sell their product in market at good price to make them happy and aware them about farmer crisis effects. A service-oriented architecture is essentially a collection of services. These services communicate with each other. The communication can involve either simple data passing or it could be involved in two or more services coordinating some activities. Some means of connecting services to each other is needed. A service is the endpoint of a connection. Also, a service has some type of depending computer system that supports the connection offered. This section provides information on the specification of services. The technology of Web Services is the most likely connection technology of service-oriented architectures. The following figure illustrates a basic service-oriented architecture. It shows the service consumer at the right sending a request message to a service provider at the left. The service provider returns a response message to the service consumer. The request and posterior response connection are defined in some way that is clear to both the service consumer and service provider.
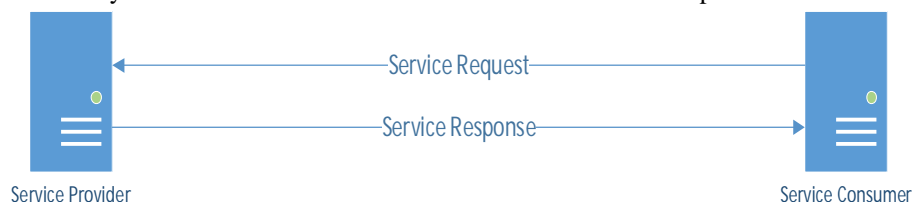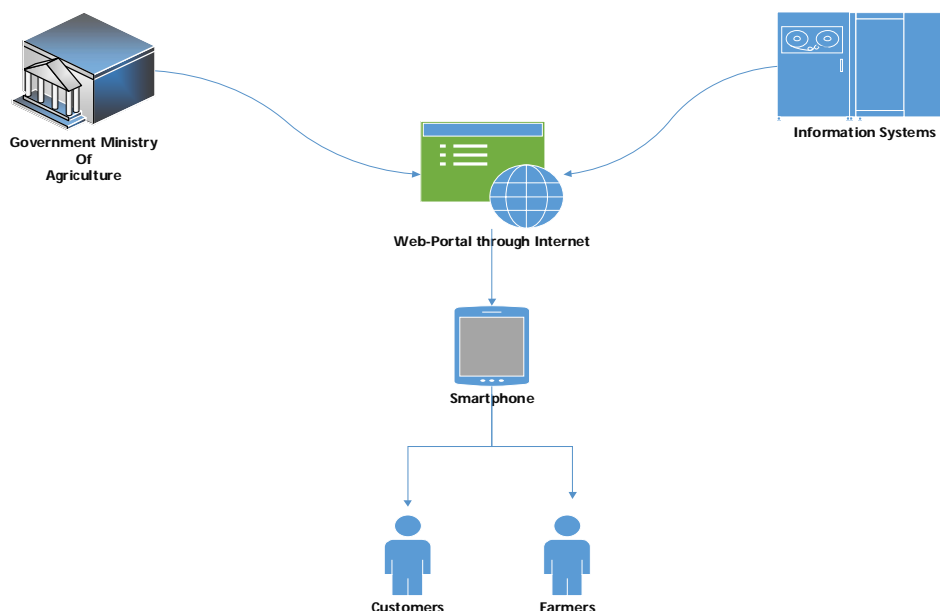

Fig. 1 SOA Architecture

Fig.2 Proposed System

VI. APPLICATIONS

This system can be used where farmer wants to sell their cereals and buyer want to buy the cereals, but they are actually unknown from each other. Our system will provide communication between farmer and customer. Our system can also be applied to sell the old product. This system can use as an e-commerce purposes. Our system can also be used in the vegetable market to buy and sell the grains, vegetables. This system can also be used where the need to display more variety to the customer. This can be used as online shopping cart also.

VII. CONCLUSIONS

Online shopping is trading of services and products with the help of internet. The e-commerce has been in the peak in India during past 2 years, the fast-growing technological changes have opened an option of online selling and purchase for a common man in India. Our Proposed System is an online platform for farmers and Customers to communicate directly to facilitate hassle-free and convenient market to buy and sell all agriculture products. And Our System gives a platform to Farmers and Buyers to provide services to contact directly for selling and purchasing products, mode of delivery on choice farmers whose self or any shipping partners and medium of payment, etc.

REFERENCES

[1] Swapnil V. Mishra and Dr. Shamkant N. Kotkar, "A Study on Current Status of E-Commerce in India: A Comparative Analysis of Flipkart and Amazon," www.ijarcsms.com, ISSN: 2321-7782, Volume 3, Issue 2, February 2015.

[2] Dr. Raju M. Thakare, Kalpana R. Thakare (Kawathekar), "Agriculture Practices Sustainability in Vidarbha," IOSR Journal of Agriculture and Veterinary Science (IOSR-JAVS) www.iosrjournals.org, e-ISSN: 2319-2380, p-ISSN: 2319-2372. Volume 9, Issue 7 Ver. I (July 2016), pp. 05-10.

[3] Kittur Nazhat, Rajendra Jain, and Parveen Kittur, "Potential of M-Commerce of Agricultural Inputs in Kolar, Karnataka, India," Research Journal of Recent Sciences www.isca.in, Volume 5(7), 1st July 2016, pp. 1-10.

[4] Ashok Panigrahi, Ranjan Upadhyaya, Dr. P. P. Raichurkar, "E-Commerce Services in India: Prospects and Problems," International Journal on Textile Engineering and Processes ISSN 2395-3578, Volume 2, Issue 1, January 2016.

[5] Ghulam Shabir, Naqvi Hamad, and Muhammad Anosh, "A True Picture of Electronic Business on Agriculture Sector of Southern Punjab, Pakistan," International Journal Of Innovative Research & Development www.ijird.com, ISSN: 2278-0211, Volume 3, Issue 5, May 2014.

[6] Darryl Jeethesh Dsouza, H.G.Joshi, "Development of agricultural e-commerce framework for India, a strategic approach," International Journal of Engineering Research and Applications (IJERA) www.ijera.com, ISSN: 2248-9622, Volume 4, Issue 11 (Version - 5), November 2014, pp.135-138.

[7] Saurabh A. Ghogare and Priyanka M. Monga, "E-Agriculture Introduction and Figuration of its Application," International Journal of Advanced Research in Computer Science and Software Engineering www.ijarcsse.com, Volume 5, Issue 1, January 2015.

[8] Sumitha Thankachan, Dr. S. Kirubakaran, "A Survey Conducted on E-Agriculture with Indian Farmers," International Journal of Computer Science and Mobile Computing www.ijcsmc.com, Vol.3 Issue.2, February- 2014, pg. 8-14.

[9] Santosh Gaikwad, Snehal Chaudhari, Bharti Deore and Swapnil Adhav, "E-Agriculture Management System Supporting to Farmer's Activity," Journal of Emerging Technologies and Innovative Research www.jetir.org, ISSN: 2349-5162, May 2015, Volume 2, Issue 5.

[10] Nidhi Dwivedy, "Challenges faced by the Agriculture Sector in Developing Countries with special reference to India," International Journal of Rural Studies (IJRS), Vol. 18 no. 2 Oct 2011, ISSN 1023–2001

[11] Chaocan Xiang, Panlong Yang, Xuangou Wu, Hong He, and Shucheng Xiao, "QoS-Based Service Selection with Lightweight Description for Large-Scale Service-Oriented Internet of Things," TSINGHUA SCIENCE AND TECHNOLOGY, ISSN: 1007-0214 03/09, pp.336-347, Volume 20, Number 4, August 2015

[12] NA XU, SUPING PENG, AND ZHANGANG WANG, "Designing Geodata Service Composition Web Application Based on Service-Oriented Architecture," IEEE Access July 28, 2016.

INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Call : 08813907089 ◎ (24*7 Support on Whatsapp)