

Case Study

Housing Inspection Application Online

Documented By:

**Mentor Minds Solutions
and Services**



Client Overview

Customer is a leading provider of industry specific business solutions targeting Retail chains Manufacturing, Utilities and Healthcare that enable smart decisions at the point of action. They are in the business of providing Retail Chain IT solutions and provide ancillary services in partnership with globally recognized corporations. Mentor Minds is their technology and project management solution partner.

Product Overview

This product was developed for both **Web Browser** and **Mobile Browser** interface using **.NET and some of the Web 2.0 and Mobile Web 2.0** technologies based on the requirement of the application. The development of this product was planned in two phases. The first phase is to develop a common functional framework, which would fit in to any type retail requirement. The second phase is to develop a specific retail application which suites into the common framework and modify / add more functionality to the common framework based on the new identified common functionality.

This case study explains one of the retail applications that aims at end users along as well as field officers and inspectors working for government and private organizations involved in housing projects.

The mobile interface of the product allows the Officers / Inspectors to capture all the relevant data as and when the inspection activities are being carried out onsite. The data being captured includes the following:

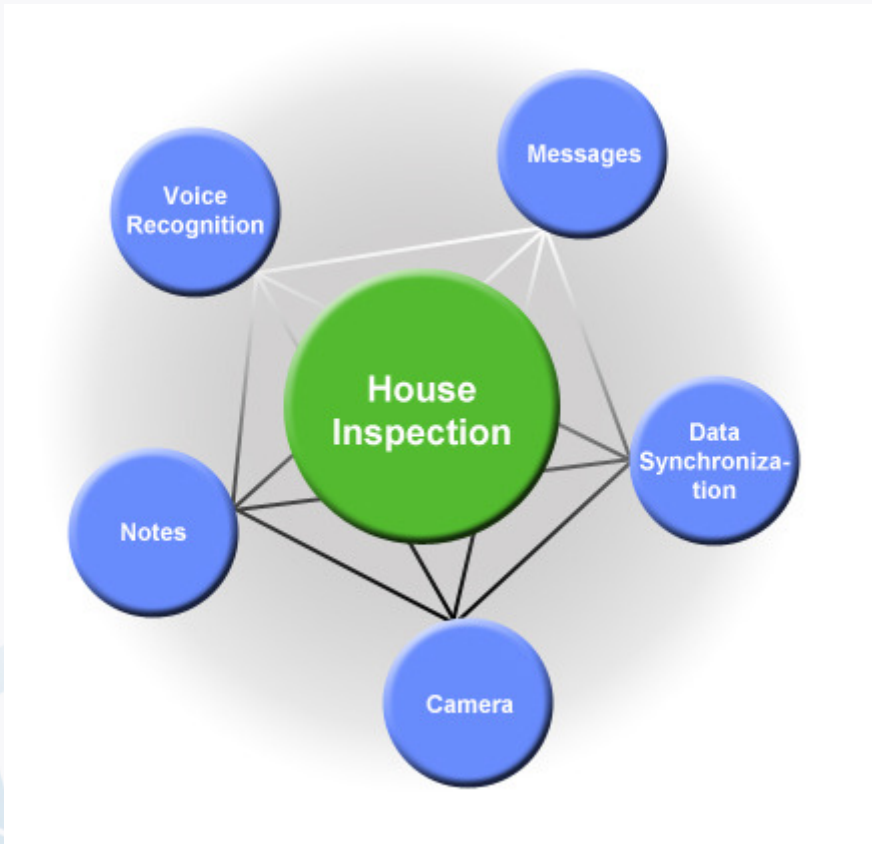
- Owner tenure
- Race and origin of household
- Year built
- Internal building conditions
- External building conditions
- Size of Unit
- Types of heating and cooling systems
- Type of plumbing, water source
- Fuels type and usage
- Failures in equipments such as toilet breakdowns, heating and electrical problems

Software Environment:

- Microsoft® Windows
- Windows Mobile 5.0 & 6.0
- .NET Framework 2.0
C#, ASP.NET
- Web 2.0, Mobile Web 2.0
- Sql CE
- HP IPAQ
- HTC Tilt
- Dell

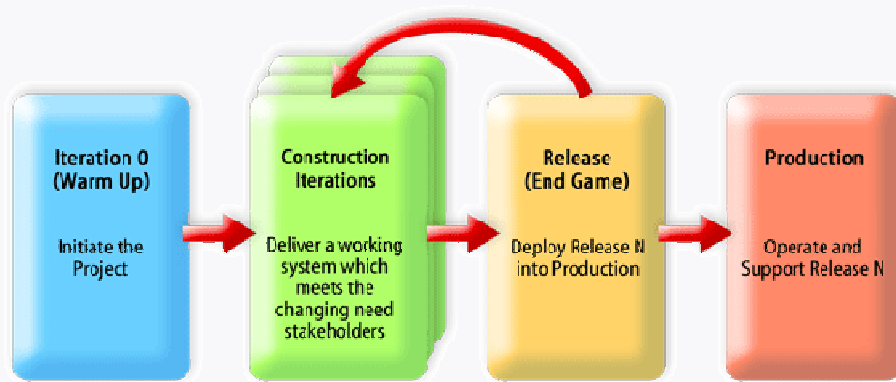
The mobile interfaces provide handheld-based inspection forms with built-in controls. Validation of data is also built into the system to enable the users to collect and submit data more accurately. All relevant master data is updated into the mobile database periodically to reduce duplicate entries and also for validation purposes. Synchronization of transaction data with the server happens either on a scheduled basis or on a real time basis depending on the availability of wireless network and bandwidth.

The Dynamic web interface allows the end users to create their own home page after registration. It also allows the users to view the reports published based on inspection and get benefited. There is an option for applying voluntary inspection by the user through online. They can share their implementation success with other users if required.



Proposed Solution & Development Model

Since the functional requirements of this product are of changing or incremental in nature because of the underlying framework development, Mentor Minds proposed to follow **Agile development model**. The system is planned to develop in smaller iterations. Each iteration is planned as full life cycle and at the end of each iteration system priorities are re-evaluated. The output of the evaluation was taken as an input for the next iteration. This method has given an advantage of reviewing the product by the customer at the early stage of development.



Agile Model of Project Development Life Cycle

Goals

- To provide dynamic, attractive user interface on internet for end users
- To provide user friendly interface for mobile data capture for the field staff
- Reduce the time of information flow between the field staff and the central server
- Reduce paper work and Increase operational efficiency
- Providing end-to-end solution starting from data collection up to reporting

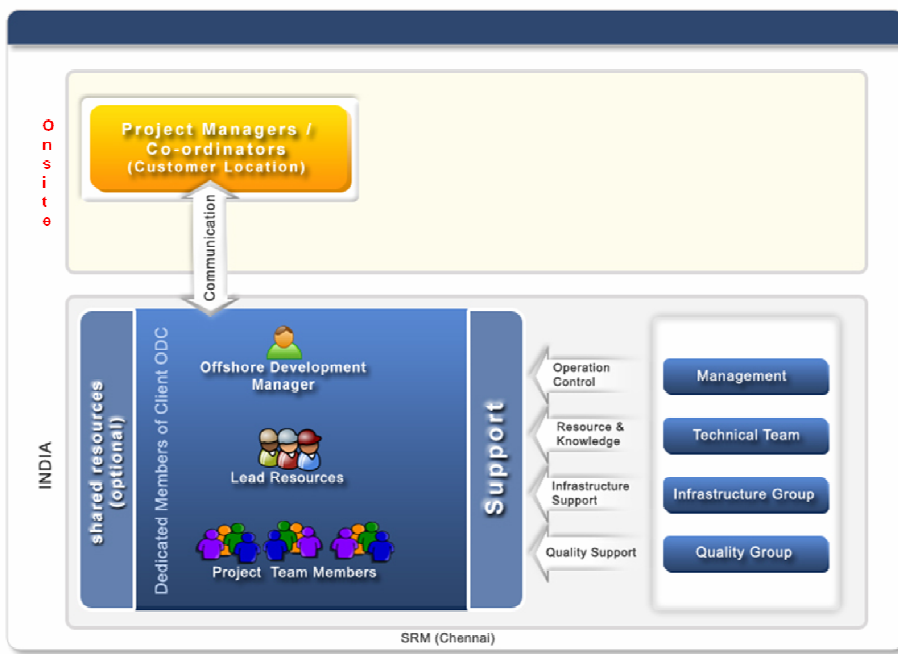
Challenges

- Managing and Controlling the project with dynamic requirement changes
- Application porting on to various models of the portable mobile devices
- Application and data security
- Interface to other external applications
- Data synchronization between the server and the device
- Voice integration



Proposed Working Model

Mentor Minds has proposed to develop this project in an Onsite / Offshore approach. One senior technical architect was present at onsite for requirement gathering from the customer. The gathered requirement was then be knowledge transferred to the offshore team to implement in the developing tool through out the project lifecycle. Since the requirement stability index is expected to be high, based on the need, additional resources were added to the offshore team on customer approval.



Confidentiality

Security and confidentiality are extremely important to our clients and our business.

Mentor Minds implements the following procedures for all our clients.

- Physical Access Control in the development center
- Firewalls / Proxy Servers
- Protection of IPR / Agreement with the customer
- Non-Disclosure Agreement with each member of the team

