****

**Hotel Guest Room Inspection System**

**Project Team Inspector**

Project Manager Gabriel Gonzales

Project Analyst Carl Justine Noriel

Project Database Analyst Kevin Barrion

System Analyst Chantal Sandivar

Project Document Handler Ingrid Magdaraog

**Project Adviser**

**INSTDEV Mr. Ernesto Boydon**

**SYSADD1 Mr. Joe Gene Quesada**

Table of Contents

[Abstract 4](#_Toc490055943)

[1 Introduction 4](#_Toc490055944)

[1.1 Project Context 4](#_Toc490055945)

[1.2 Purpose and Description 4](#_Toc490055946)

[1.3 Statement of Objectives 4](#_Toc490055947)

[1.4 General Objectives 4](#_Toc490055948)

[1.5 Specific Objectives 4](#_Toc490055949)

[1.6 Scope and Limitations of the Study 4](#_Toc490055950)

[2 Review of Related Literatures/Systems 5](#_Toc490055951)

[2.1 Local Literatures 5](#_Toc490055952)

[2.2 Foreign Literatures 5](#_Toc490055953)

[2.2.1 Knowcross 5](#_Toc490055954)

[2.2.2 Amadeus 5](#_Toc490055955)

[2.2.3 Hotel Service Pro 6](#_Toc490055956)

[2.2.4 InspectionApps 6](#_Toc490055957)

[3 Technical Background 6](#_Toc490055958)

[3.1 Programming Language 6](#_Toc490055959)

[3.2 Resource Requirements 6](#_Toc490055960)

[3.2.1 Hardware Requirements 6](#_Toc490055961)

[3.2.2 Software Requirements 6](#_Toc490055962)

[3.2.3 Human Resource Requirements 7](#_Toc490055963)

[4 The Existing System 7](#_Toc490055964)

[4.1 Company Background 7](#_Toc490055965)

[4.2 Description of the System 7](#_Toc490055966)

[4.3 Data Flow Diagram 7](#_Toc490055967)

[4.4 Data Dictionary 7](#_Toc490055968)

[4.5 Problem Areas 7](#_Toc490055969)

[5 The Proposed System 7](#_Toc490055970)

[5.1 System Overview 7](#_Toc490055971)

[5.2 Process Specification 7](#_Toc490055972)

[5.2.1 Data Flow Diagram 7](#_Toc490055973)

[5.2.2 Data Dictionary 8](#_Toc490055974)

[5.3 Data Specification 8](#_Toc490055975)

[5.3.1 Entity-Relationship Diagram 8](#_Toc490055976)

[5.3.2 Tables/Files Layout 8](#_Toc490055977)

[5.4 Screen Layout/Specifications 8](#_Toc490055978)

[5.5 Report/Form Specifications 8](#_Toc490055979)

[5.6 Program/Module Specifications 8](#_Toc490055980)

[6 Methodology, Results and Discussion 8](#_Toc490055981)

[6.1 Requirement Analysis 8](#_Toc490055982)

[6.2 Requirement Documentation 8](#_Toc490055983)

[6.3 Gap Analysis / Needs Assessment 8](#_Toc490055984)

[6.4 Design of Software, Systems, Product, and/or Processes 9](#_Toc490055985)

[6.5 Development and Testing, where applicable 9](#_Toc490055986)

[6.6 Description of the Prototype, where applicable 9](#_Toc490055987)

[6.7 Implementation Plan (Infrastructure/Deployment) where needed 9](#_Toc490055988)

[6.7.1 Site Preparation 9](#_Toc490055989)

[6.7.2 Personnel Training 9](#_Toc490055990)

[6.7.3 System Conversion 9](#_Toc490055991)

[6.7.4 Data Conversion 9](#_Toc490055992)

[6.7.5 Implementation Schedule 9](#_Toc490055993)

[6.8 Implementation Results, where applicable 9](#_Toc490055994)

[6.9 Include Discussions on Conceptual Design/System Architecture/Block Diagrams and Algorithms 9](#_Toc490055995)

[7 Conclusions and Recommendations 9](#_Toc490055996)

[8 System Maintenance Plan 9](#_Toc490055997)

[Appendices 9](#_Toc490055998)

[Bibliography 9](#_Toc490055999)

[Resource Persons 9](#_Toc490056000)

# **Abstract**

# **Introduction**

## **Project Context**

The researchers are undergoing Asia Pacific's Project-based Learning track for IT professionals. In the group's Introduction to Systems Analysis & Detailed Design, the researchers were tasked with being experts with respective problem domain. The researchers were assigned to Taal Vista's hotel guest room inspection system.

A hotel's room inspection system makes sure that every guest room is checked daily by the housekeeping department before the room is ready to be booked by a customer. This system helps hotels attain high guest satisfaction in terms of room comfort and enjoyment as well as keeping hotel standards in check. No matter the size of a given hotel, whether the establishment is well known or just starting up, it is a key practice of excellence for a hotel to conduct daily room-to-room inspections to ensure that the hotel's excellence criteria is consistently met.

The developer's client, Taal Vista Hotel, wants to move from conducting hotel guest room inspections on a paper-based checklist to a mobile application checklist. The client also wants QR codes (abbreviated from Quick Response Code) to be implemented into the inspection process to automate the recording of inspection time-in and time-out as there is no current way of automatically recording such time stamps. The developer's proposed solution is to create a mobile application that would replace the current inspection process as well as being able to scan QR codes to record the inspector's room inspection time-in and time-out.

## **Purpose and Description**

The developers aim to improve Taal Vista Hotel's current guest room inspection system by taking the client's requirements and developing a proposed system which allows (1) Creating a mobile application for the current paper-based inspection process, (2) Implementing Quick Response Code (QR Code) stamps for automated recording of the inspector's room inspection time-in and time-out, as well as (3) Generating room inspection reports from every completed room inspection.

## **Objectives**

The developer's objective throughout this project are as follows:

## **General Objectives**

* To reduce paper consumption within the hotel's inspection system.
* To convert the current system into a mobile application as required by the client.
* To implement QR code system for monitoring inspection time-in and time-out.
* To generate report for each hotel guest room inspection.

## **Specific Objectives**

## **Scope and Limitations of the Study**

The study held by the project developers will focus on increasing the productivity and performance of Taal Vista's hotel room inspection system. Eliminating any redundancies and unnecessary processes within the department's staff and management. The proposed system will be designed to work specifically with the hotel room inspectors (conducting inspections) and the entities that these inspectors interact with on a day-to-day operational basis. The system is only intended to function internally. Therefore, the proposed system will have no external connections and/or functions. The system will not include solutions to problems, rather, the system would point out these problems through data gathered over time. A separate department/system will be responsible for resolving problems that the room inspection system would point out. The proposed system will only be implemented within the housekeeping department, and not the other departments of Taal Vista Hotel.

# **Review of Related Literatures/Systems**

## **Local Literatures**

## **Foreign Literatures**

### Knowcross

(<http://www.knowcross.com/know-inspection/>)

Knowcross shows a new level of user defined application aiming to increase productivity of the staff, satisfaction of the guest and reduce carbon footprint. Same with the proposed system, it also aims to reduce the carbon foot print of the hotel inspection by creating a mobile application which will also generate and submit checklist electronically.

Features of this application:

* User defined checklists - Client has capability to create and modify their own checklist based on organization needs.
* Rich data capture including images, comments and other user defined fields – the application can capture an image for quality control standard of a room and comment section which each row includes a text input which allows users to add relevant comments.
* Location (GPS) and time stamp for every inspection item - User actions are tracked when someone conducts an inspection, issues a corrective action or leaves a comment. It will also show the date, time and location of the action.
* Reports – The application will generate detailed analysis of the inspection report regarding the result of the inspection based from the quality standard of the hotel rooms.
* Multiple scoring options (pass/fail or rating scale) – other feature of this application itself is a digitized multiple score sheet. The inspector will rate within the ranges of score sheets so the manager will able to know the condition of the product.

### Amadeus

(<https://www.amadeus-hospitality.com/amadeus-service-optimization/hotsos-housekeeping/>)

HotSOS Housekeeping is using a cloud-based solution that automates housekeeping daily operation, resulting in reduced check-in wait times and increased guest satisfaction.

Features of this application:

* Prioritize and reports - Managing the prioritization virtually based on the business needs. Generate report for guestrooms that has deficiencies and guest request right away.
* Connection to employees - Enabling employees to connect and manage task with their department and colleagues anywhere and on any device. Gauge and assess productivity, guestroom cleaning patterns and discuss how they could improve their services for the satisfaction of their customers.
* PMS Integration - Integration with the Property Management System (PMS) which will provide automatic update for room status, guest preference and room rates.

### Hotel Service Pro

(<http://www.hotelservicepro.com>)

Hotel Service Pro provided the researchers with insight as to how current room inspection systems could be operating if such an application was developed for Taal Vista Hotel. Hotel Service Pro's inspection app gave the researchers similarities to differentiate with as to what features would be integrated in a room inspection app for the group's project. These features included customized checklists, inspection scheduling, and analysis for hotel managers to base decisions upon and will be implemented in our future project.

Features of this application:

* Software Updates - Continuous update to improve the Hotel SystemPro and encouraging the customers to update is to latest version at no cost.
* Customer Support - Offers 24/7 customer service and technical team available to assist customers.
* iServicePro - Mobile version of hotel ServicePro is also available for the user to review calendar, create and complete guest request, work orders.

### InspectionApps

(<http://www.inspectionapps.com/>)

Inspection Apps replicates paper based checklist by using a cloud based inspection management system that can record inspection data, capture defects and take photograph online and offline using iPhone, iPad or iPad Mini. The data will be automatically uploaded to the cloud based application which can be converted to a PDF client or management report.

Some Features of this application:

* Inspection timer- measure the productivity and record inspection time of your field staff for billing purposes
* Show a variety of fields, specific to your industry- Customizable data for your field staff to be read on their device.
* Integrate with iCal/Outlook- Get reminder or plan ahead of time using the integrated iCal/Outlook.
* Answer-Sensitive Email Alerts- Real time notification to Managers or back office staff if an issue is urgent or arises.

# Technical Background

## **Programming Language**

## **Resource Requirements**

### Hardware Requirements

### Software Requirements

### Human Resource Requirements

# **The Existing System**

## **Company Background**

## **Description of the System**

## **Data Flow Diagram**

## **Data Dictionary**

## **Problem Areas**

# **The Proposed System**

## **System Overview**

## **Process Specification**

### Data Flow Diagram

A picture containing text, map

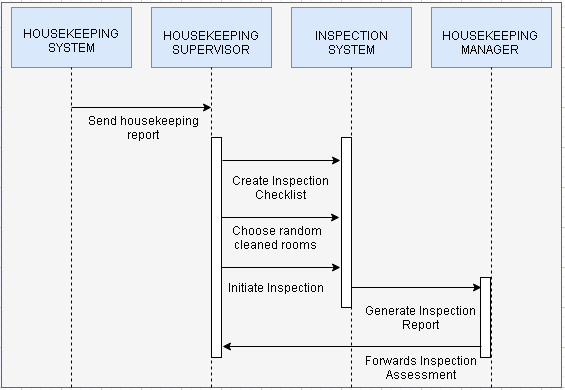
Description generated with very high confidence

A close up of a map

Description generated with high confidence

### Data Dictionary

### Sequence Diagram



### Activity Diagram

A picture containing parking, meter

Description generated with high confidence

### Use Case Diagram

A close up of a map

Description generated with very high confidence

## **Data Specification**

### **Entity-Relationship Diagram**

### **Tables/Files Layout**

## **Screen Layout/Specifications**

## **Report/Form Specifications**

## **Program/Module Specifications**

# **Methodology, Results and Discussion**

## **Requirement Analysis**

## **Requirement Documentation**

## **Gap Analysis / Needs Assessment**

|  |  |  |  |
| --- | --- | --- | --- |
| **User Requirements** | **Current System** | **Proposed Changes** | **Remarks** |
| 1.The inspection process wants to reduce paper consumption. | Inspection checklists are written on paper. | The developers will develop a mobile application for the inspection process. |  |
| 2.The inspection process should implement a way to record inspection time-ins and time-outs. | There is no current way to record the inspector's time-in and time-out. | The proposed system will implement QR codes to record inspection time-ins and time-outs. |  |

## **Design of Software, Systems, Product, and/or Processes**

## **Development and Testing, where applicable**

## **Description of the Prototype, where applicable**

## **Implementation Plan (Infrastructure/Deployment) where needed**

### Site Preparation

### Personnel Training

### System Conversion

### Data Conversion

### Implementation Schedule

## **Implementation Results, where applicable**

## **Include Discussions on Conceptual Design/System Architecture/Block Diagrams and Algorithms**

# **Conclusions and Recommendations**

# **System Maintenance Plan**

# Appendices

# Bibliography

# Resource Persons