Project Name	Ellies In-Store Quotation App - Scope and Specification
Client	Ellies Holdings Limited
Date Prepared	31-01-2013
Development Time	2 Weeks
Table of Contents	

Introduction

Cloud Group (Pty) Ltd is a well experienced programming and design firm. This document will elaborate on all work required by Cloud Group to ensure the project is delivered as expected to the end customer.

This proposal will also detail the amount of work required, time lines and the costs involved in developing the required features as laid out in the document.

Confidentiality

This document is to remain confidential between the parties involved, both Cloud Group (Pty) Ltd and Ellies Holdings Ltd. This document may not be shared with unauthorised parties unless mutually agreed upon by both Cloud Group (Pty) Ltd and Ellies Holdings Ltd.

Description of the project

Ellies is a distributor of electronic products and appliances, this project is specific to the energy saving products distributed by Ellies. Ellies have prepared an excel spreadsheet which contains formulas to calculate the cost, payback and cost saving differences when switching from non-energy saving devices to the newer energy saving products offered by Ellies. The projects purpose is to expose the spreadsheet functionality to representatives and customers with additional functionality and a customer friendlier interface.
Ellies requires an application that can be accessed by a computer / mobile device located in an Ellies store. These stores will be situated within several *Builders Warehouse* retail stores with the goal to promote the Ellies products and make customers aware of the short and long term savings when purchasing the Ellies energy saving products.

The application is required to be built with the ability to expose it directly to customers at a later stage via the means of a mobi website (tablet and phone friendly), this interface to direct consumers is excluded from this scope but taken into account in the programming of the project.

The system will be built with a dynamic nature, and every constant data value for a technology can be adjusted with an administrative role. This includes the creating, updating and deleting of technology items within a category. The formulas will be assigned based on technology category, therefore having static formulas applied to any technology item within a specific technology category.

Revision History

All programming and source code will be stored within a repository with a change log, This repository is kept up to date and run directly from the live environment. Cloud Group uses this repository for code reviews and internal auditing of changes made.

Project hardware requirements

This project require no hardware requirements, and the application will be hosted on a SaaS (Software as a service) cloud based server.

Project software requirements

The project will use open source based technologies with a open source database backend for easy data ownership and to avoid licensing costs. This lowers the hosting cost whilst providing a more secure and reliable hosting environment.
The programming done in this project will be done in PHP, this language is a world class language and one of the most commonly used languages in the development industry.

All programming is done to an internal programming standard within Cloud Group, this ensures programming consistency and easy to be read and maintained.

Goals and objectives

The goal and objective of this project is to use the application as an informative sales tool, with the benefit of capturing a database of customers for marketing and advertising purposes.

The tool will be used to give the customers insight into the cost saving benefits when purchasing an Ellies energy saving product, included in this will be the payback period / ROI on the purchase.

Project Exposed Interfaces

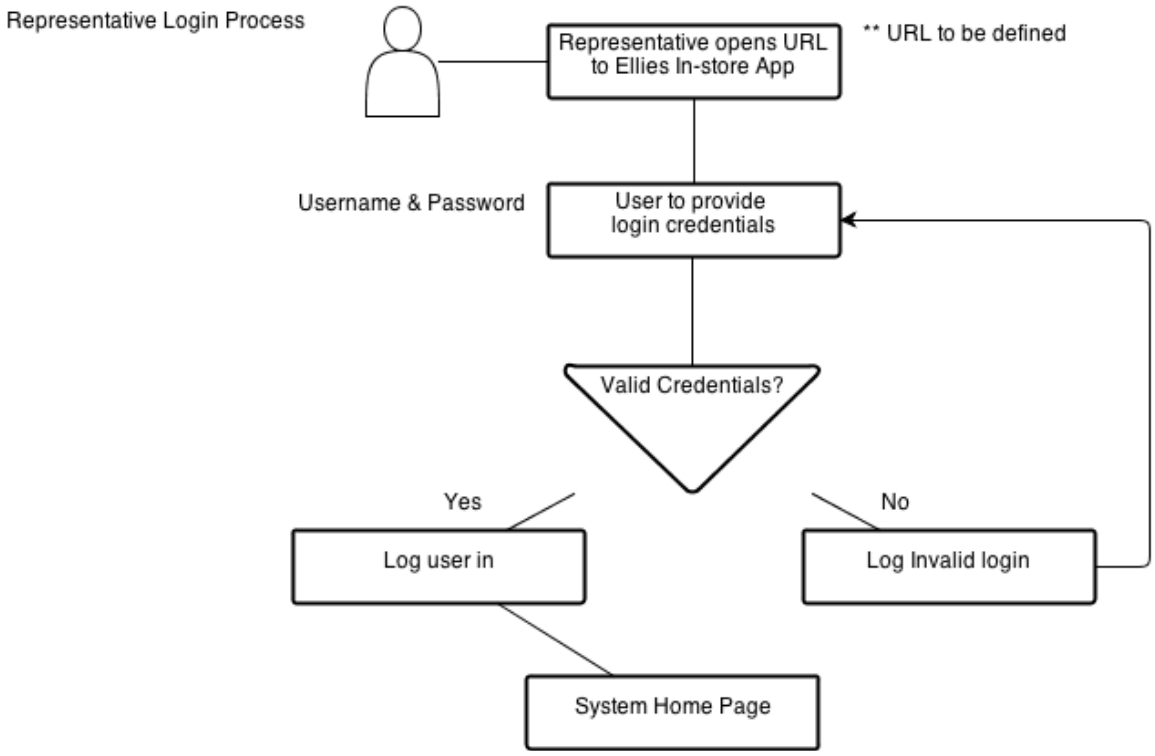
The project will expose a web based interface to handle all inputs from a customer / Ellies representative which will be captured into a browser from the Ellies store, The interface will be minimalistic and keep the data displayed in a easy to read format. The web browsers supported for this interface will be Firefox, Internet Explorer 8+, Safari, Chrome.

This initial interface will be designed for a high resolution end device, IE a big screen device (computer or tablet). If Ellies want to make the app available at a later stage to end customers, the interface will be ported to the mobile environment and will not require any programming changes be made to the logical and calculation code.

Representative operational process flows

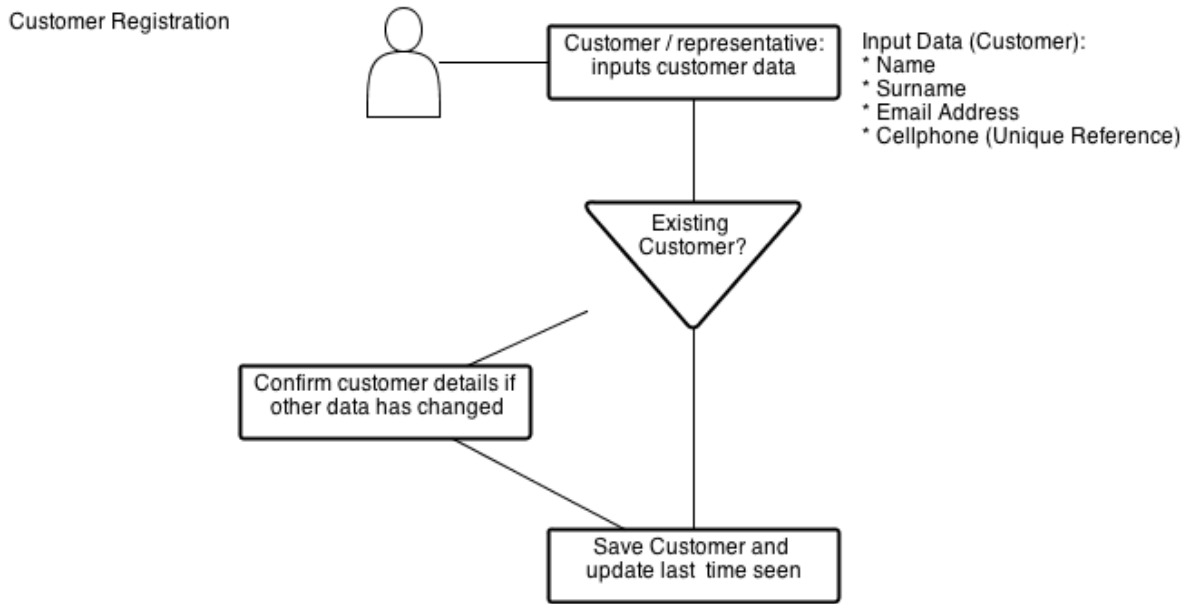
Representative Login Process

This process shows the flow of the login process for the Ellies representative, This process will authenticate the user against authorised users from the backend database.



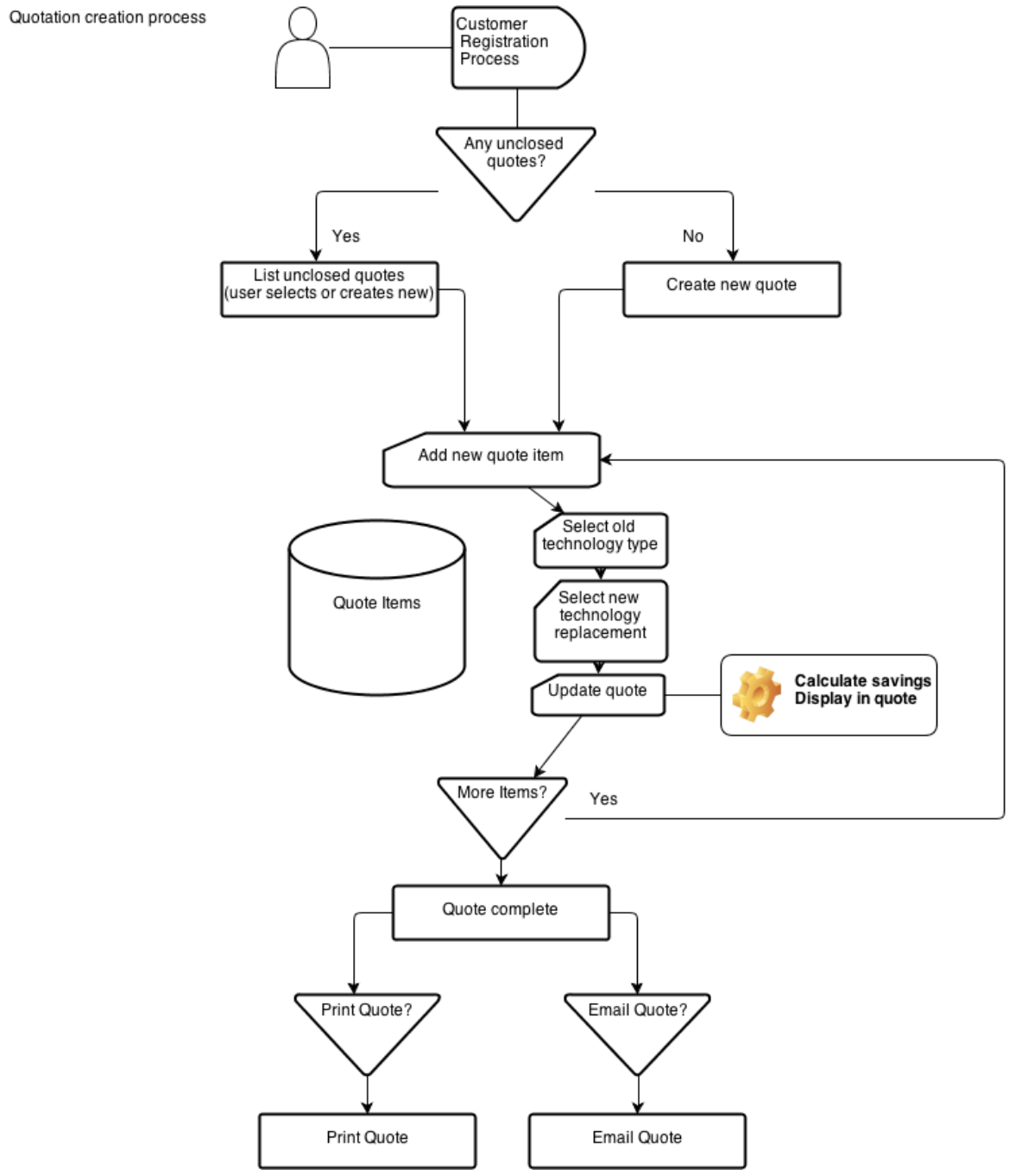
Customer Registration

This is the process customers will be registered onto the quotation system with, All customers need to provide a minimum criteria to create a quote. Ellies representatives will capture this data for the customer, or assist the customer in doing so themselves in front of the application.



Quotation creation / update process

The quotation process defines the step for a customer to create a new quote or update an existing quote on the quotation system.



Calculation Processes

Technology Type	Replacement Technology	Units of measure	Input Data (Usage)	Constant Data
Lighting	Floodlights	kWh	Hourly, Daily, Weekly Hours	Old Tech kWh, New Tech kWh, New Tech Lifespan, Unit Cost
	Fluorescent	kWh	Hourly, Daily, Weekly Hours	Old Tech kWh, New Tech kWh, New Tech Lifespan, Unit Cost
	Halogen	kWh	Hourly, Daily, Weekly Hours	Old Tech kWh, New Tech kWh, New Tech Lifespan, Unit Cost
	Incandescent CFL	kWh	Hourly, Daily, Weekly Hours	Old Tech kWh, New Tech kWh, New Tech Lifespan, Unit Cost
	Incandescent LED	kWh	Hourly, Daily, Weekly Hours	Old Tech kWh, New Tech kWh, New Tech Lifespan, Unit Cost
Flow Regulators	Regulators (Flow restrictive)	L / min	Usage Litre Measurement, Usage per day	New Tech L/Min, Unit Cost
Handshower	Handshower (Flow restrictive)	L / min	Usage Litre Measurement, Usage per day	New Tech L/Min, Unit Cost
Showerhead	Showerhead (Flow restrictive)	L / min	Usage Litre Measurement, Usage per day	New Tech L/Min, Unit Cost

Technology Type

This field is a defined category for a specific kind of replacement technology, This category will define the formula and calculations required to calculate the required result data to display to a customer.

Replacement Technology

This field is the technology type that can be replaced with a more efficient energy saving equivalent, this selection will vary the constant value data used in the calculation based on the technology selected for replacement.

Units of measure

This field is the unit of measure in calculation, the *Technology Type* defines which unit of measure is applicable to the technology selected. The system will be built to understand two types of unit of measure:

kWh	Kilowatt Hour	Measurement of power usage in an hour, 1 KwH is equivalent of 1 Kw (1000 Watts) expended for one hour (1 h) of time.
L/Min	Litre / Minute	A volumetric flow rate equal to one litre of fluid flowing each minute

Input data (Usage)

Input data field is a value required from the customer at the time of quotation, this data varies depending on selected technology category. This data is used to calculate the consumed amount of energy, and intern calculate the usage of the replacement technology and giving the customer a saving value in the quotation.

Constant Data

This data is constant per replacement technology type device, Eg. known kWh or L/Min rate for new replacement technology. This is used along with amount of input data usage to calculate the amount of energy required using new technology.

Calculation Example

Technology Type:	Lighting - Incandescent CFL
Replacement Option:	100W - B22 To Energy Saver 20W B22 Mini Spiral - 6500K (Cold White)
Units of measure:	kWh (Kilowatt Hour)
Input Data:	(*A*) Qty = 1
	(*B*) Hours per day = 8
	(*C*) Days per week = 7
	(*D*) Weeks per year = 50
Constant Data:	(*E*) old Tech kW = 0.1 kW (100 W)
	(*F*) new Tech kW = 0.02 kW (20 W)
	(*G*) new Tech Life Span = 8000 Hours
	(*X*) cost per kWh = R1.20
	(*Z*) unit cost = R 42.99

Usage hours per year:

(*B* (hours) x *C* (days)) x *D* (weeks) = *T* (hours)

(*8* x *7*) x *50* = *2800* (hours)

Calculate Old technology kWh (annually):

Y(kWh) = (*E*(kW) x *A* (Qty)) x *T*(hours)

560 (kWh annual) = (*0.1* (kW) x *2* (Qty)) x *2800* (hours)

Calculate New technology kWh (annually):

Y(kWh) = (*F*(kW) x *A* (Qty)) x *T*(hours)

112 (kWh annual) = (*0.02* (kW) x *2* (Qty)) x *2800* (hours)

Calculate Old technology monthly cost:

X (cost per kWh) x (kWh usage) ⁄ 12 (months) = *MC* (monthly cost)

R 1.20 (cost per kWh) x (*560* kWh ⁄ 12 (months)) = R 56

Calculate New technology monthly cost:

X (cost per kWh) x (kWh usage) ⁄ 12 (months) = *MC* (monthly cost)

R 1.20 (cost per kWh) x (*112* kWh ⁄ 12 (months)) = R 11.20

Database backend

The database maintained in the backend database needs to be an open accessible database format as per the requirements of the project. This data should be readily available for export by Ellies for external data analysis and reporting.

For this project the MySQL (SQL) database (www.mysql.com) will be used as the backend database.

Users Module (For authentication)

The system will require each user to be logged in before viewing or performing any changes, ensuring that no unauthorised personnel have access to the data. To allow the capturing or generating of quotes for customers.

Permissions Module

The system will initially have two user groups. The *super administrator*, *representatives*. The super administrator will have complete access to the different modules of the system, and can perform all administrative functions; this group has all the system permissions. The super administrator may add new groups, change group names and descriptions, and delete groups. They can also add new members, or remove existing members from a group. Any user can

belong to more than one group.

Audit trail

The system will keep a record of all user activity. This will provide a means to help accomplish several security-related objectives, including detecting user violations, individual accountability, system flaws, problem analysis.

System support and bug fixes

Cloud Group will be required to repair any bugs or software defects for a (minimum) 12 month period after the go live date. After the 12 month period bug fixes will be handled in a manner agreed between both parties, externally of this document.

System test phase

The system will be put through an initial internal test phase, The client can opt-in to the test phase and be provided access to the system for their own testing purposes. The test phase will be run by non project involved developers, and all bugs or issues found during this test phase will be resolved prior to the go live date.

Project breakdown

Section	Hours
Customer Section (Creating, Update)	12 h
- Creation of new customer entries in database	
- Input validation fields for customer entries	
- Checking for duplicated customers	
- Updating customer records	
- Report to extract customer list from database via web Interface	

- Customer old technology mapping (per system quotes) - Customer new technology mapping (per system quotes)	
Technologies Section	12 h
- Adding new technology items to technologies categories database	
- Update existing technologies within database	
- Creating technology categories and formula selection	
- Updating / Removing technology items or categories	
- Applying different input validations and input data to technology categories	
- Generation of formulas to be used with different categories	
Capturing product info (CMS)	16 h
- Creating a dynamic page per product using a WYSIWYG editor	
- Handling the display and formatting of the dynamic content	
- WYSIWYG editor integration within the web application	
- Dynamic pages for old type technology item, and new technology type item	
Users module	12 h
- Creation of users and user data / quotation association	
- Management of users within permission groups	
- User region / store association	

Permissions module	8 h
- Creating and editing of user permission groups	
- User group permission allocations	
- System permission functions	
Showing projections based on given calculations	12 h
- Formula selective and extraction from data model association	
- Creating formula category allocation section	
- 2 Formulas created	
- Quote update and result calculation and display to representative	
Audit trail	6 h
- User audit log of all system functions	
- Log system failures and possible issues within the system	
- Report to extract the audit trail and display user online times	
Testing	8 h
- Testing of system functions and permissions, end - to - end	
Total hours:	86 Hours

Acceptance of scope document

I / We _____
(Person Responsible/Company Name) hereby agree to the above mentioned terms and conditions stated above. Any requests outside of this document are not included within this project's scope and need to be handled separately within a different scope document.

Signed on this _____ day of_____ 20_____.

_____ _____
Client Signature Witness

_____ _____
On behalf of Tradepage Witness