**VISION AND SCOPE DOCUMENT**

**For**

**Mega Shopping Center Beacon Technology**

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**1. Business Requirements**

Mega is a big shopping center with several retail shops selling various goods to the public for profit and is some shops open for seven days a week.

**1.1 Background**

Mega, like many other shopping centers around the country, attracts thousands of visitors each day to who come to do their shopping, some come shopping for basic needs like groceries, others come in response to advertised products. The main type of advertising favoured by Mega is Television and radio, billboards and junk mail dumped in letterboxes. Business is performing well but competition is posing a serious threat and management is hard-pressed to find ways of staying ahead of its competitors.

**1.2 Business Opportunity**

Beacon technology has been in existence in various form for centuries. Originally, beacons were placed on high ground and emitted a signals to mark their presence at specific locations for purposes of guiding travellers. And fire was used to light them up to, for instance, alert troops of approaching enemies. These beacons stored and transmitted only one message - its physical location. With advances in digital technology, beacons are now capable of storing more information than its mere position. Indeed, its mere position is now less important than the other information it can carry. They can now be placed anywhere like in buses, taxis, shopping malls; and also are able to communicate with other modern devices like smartphones or tablets. This beacon technology opens up a number of business opportunities by enabling “things” to communicate.

Mega shopping center, always on the look-out for more opportunities to increase profits in digital technology looked at the business opportunities that can be availed by Beacon Technology and decided that this technology can be used in advertising to boost their sales. They currently use traditional methods of advertising like TV and radio, newspapers and websites and they hope that Beacon advertising can significantly complement these efforts, and place them ahead of competitors. Currently there are no known shopping centers in the neighbourhood that use this technology. In the United States, [a number companies](https://www.forbes.com/sites/homaycotte/2015/09/01/beacon-technology-the-what-who-why-and-where/#7b08c401aaf8) have been using this technology for a few years in retail and there are indications that they are registering significant boosts in sales.

**1.3 Business Objectives and Success Criteria**

The primary business objective of Mega is to aggressively improve traffic to its shops through innovative advertising. Mega hopes this can be achieved by the introduction of Beacon technology, powered by Bluetooth Low Energy and success for this innovative venture can be estimated by :-

1. pushing pricing specials to registered visitors’ mobile devices as they pass close to shops installed with these BLE beacons; this is expected to result in 15% more customers entering those shops within the next 3 months
2. recording the number of customers with beacon applications who are visiting the shop every day; this number is estimated to grow by 10% every month.
3. keeping track of the number of customers who are downloading the app; so far 28% of visitors have downloaded the app in the 3 three months.

4. enabling consumers to consult their devices for competitive prices, product and warranty information, or, where possible, pay for their purchases; these features will result in an increase in downloads of 15% in 3 month.

**1.4 Business Assumptions and Dependencies**

All main entry points to the shopping center are equipped with counting beacons to record numbers of visitors entering or leaving. And vital statistics can be derived from these recordings in order to generate information like the number of visitors to the center everyday; most information can be gleaned from these recording’

**1.5 Business Risks**

|  |  |  |  |
| --- | --- | --- | --- |
| **Risk ID** | **Risk** | **Probability** | ***Impact*** |
| **rid-1** | Some members of staff may be averse to changes brought by this technology; so may refuse to explain it to customers | 0.2 | *3* |
| **rid-2** | Customers might take exception to having their phones loaded with unfamiliar apps, and this may impact negatively on ROI | 0.7 | 5 |
| **rid-3** | Competition may get stiffer if competitors lay their hands on the technology before Mega’s project takes off the ground | 0.8 | 7 |
| **rid-4** | Shops without beacons may feel excluded, and start  de-campaigning those with beacons. This will have unintended outcomes and is bad for business | 0.5 | 3 |
| **rid-5** | The center may encounter problems recruiting a Beacon Manager because the technology is very current and as such, there cannot be any one in the country with genuine expertise in that field | *0.2* | *4* |
| rid-6 | There is always inherent risk associated with being an innovator and might as well budget for surprise loss | 0.1 | 6 |

*Impact in the table below is measured on a Lickett scale ---- 0 to 9 with 9 as highest negative impact*

**2. Vision of the Solution**

Beacons technology will bring to Mega more visitors, some enthusiastic to interact with this technology, others sceptical but curious. Overall, they will bring more revenue to Mega.

**2.1 Vision Statement**

**For** Customers

**Who** wish to receive, while in the shopping centre, timely messages to promote products on the market, or to receive other useful information like special discounts on some products, or to receive personalised offers and fast checkout privileges

**The** Bluetooth Low Energy Beacon app

**Is** a tablet or smartphone-based or wearable device

**that** will send messages to registered customers in the center welcoming them to the center and inviting them to take advantage of all these facilities

**Unlike** the current advertising methods where customers learn about special discount sales and new products while you are away from the center, beacons give you this information while you are within the center so that you can swing into action immediately.

**2.2 Major Features**

**The new beacon system will have the following features:**

**2.2.1 Center Management**

- Number of visitors to the store

- What they look at and what they buy

- In-store tracking

- how long they stopped at beacon-enabled displays

- relationships between beacon-enabled sales and actual sales,

- information to adjust offers

**2.2.2 Improved Customer Engagement**

**-** Provide new product information

- Provide downloadable vouchers

- Push notifications

- Faster checkout

**-** Loyalty rewards

**3.** Scope and Limitation

Mega Shopping Center will install Beacon technology in a bid to boost its marketing thrust on consumer. It will provide a beacon app which customers can download to their mobile phones or tablets. These beacons can be small enough to be concealed in strategic places in order not to attraction attention. When customers who downloaded the app to their smartphones enter the Center, beacons nearest to the customer will send messages to the customers’ phones inviting them to their shops and some other information that might be of interest.

Beacon will also be used to gather information such as the number of visitors to the center who use this application in order to analyse their impact on profits. This information is required by management. Also, store managers will use the system to push pricing specials, update that information, and remove it.

The beacons have a limited range so will not be able to pick a customer who is more than 60 metres away. Also their battery life is limited to about 100 hours but more powerful batteries are expected in the near future. The beacons are extremely cheap and will have no impact on the Center’s finances; only the app and installation costs may run into a few thousands of dollars.

**3.1 Scope of Initial and Subsequent Releases**

The initial release will deal more with management and staff. It will provide information on training requirements and user manuals**.** The customer will be provided with information on how to download and install the app on their phones, and how to get started; they will be able to see advertisements only.

**3.2 Limitations and Exclusions**

The initial release will not include features such as pricing specials, tracking, or special checkouts. More functionality will be added gradually as the system stabilises and staff get more confident and proficient.

**4. Business Context**

Mega top executives, led by the Marketing Manager, are the major stakeholders in this project, with enormous influence on the outcome of the project. The departmental heads and shop managers are responsible for uploading information to, and downloading it from, the beacons. The technical team , which is the project team, will be responsible for implementing this technology, after which the Beacon Manager will take over and be responsible for the day-to-day running of the application.

**4.1 Stakeholder Profiles**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **StakeHolder** | **Major Value** | **Attitudes** | **Major interests** | **Constraints** |
| **Chief Executives** |  |  |  |  |
| **Department Manager** |  |  |  |  |
| **Project Team** |  |  |  |  |
| **Customers** |  |  |  |  |
|  |  |  |  |  |

**4.2 Project Priorities**

|  |  |  |  |
| --- | --- | --- | --- |
| **Dimension** | **Driver(state objective)** | **Constraints(state limits)** | **Degree Freedom(state allowable range)** |
|  |  |  |  |
| **Schedule** |  |  |  |
| **Features** |  |  |  |
| **Quality** |  |  |  |
| **Staff** |  |  |  |
| **Cost** |  |  |  |

**4.3 Operating Environment (Deployment Considerations)**

More beacons will be installed gradually as demand increases and at the discretion of the Beacon Manager whose roll it is to make strategic decisions about beacons distribution, and in consultation with the Sales Manager.

Updates to the application will be uploaded to the customer’s smartphones without the customer’s intervention, and all issues arising will be channelled to the beacon manager’s office for speedy resolution.

**5 Conclusion**

**6 References**

1. **Course Notes**