

## Strategies for product improvement: Tracing the attitude of real estate mobile application customers at Coimbatore district.

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**ABSTRACT:** Product improvement formerly a concept of ingenuity and research has realigned its orientation to the changing scenario and is concerned with providing a solution to customer needs and wants. The customers of the 21<sup>st</sup> century are not only knowledgeable but technology driven demanding a perfect product in a prompt manner nevertheless at reasonable price. The impulsive customer also tends to be rational when investments are high as in the case of real estate sector. Technology infusion is just a click away for the marketers of the digital era. The universal truth that 90% of customers browse the Internet before a purchase is acknowledged by the National Association of Realtors. Moreover mobile application the rage among the consumer's centres on user interface mandated by the customer dictates. Customer driven strategies the norm of knowledge economy is the process of responding to data mining or precisely opinion mining. Products cannot sustain in a competitive arena if customers are excluded and so feedback from the real estate customers regarding mobile application was collected using an explorative study. The research confining to Coimbatore district with respect to mobile application forms a premise to design a winning product.

**Keywords:** Customer Feedback, Interface Design, Mobile Application, Product Improvement, Strategy.

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### I. INTRODUCTION

The real estate business, a capital intensive sector has started to occupy a prominent place on the digital pages of websites and mobile applications. Speculations regarding that the online real estate tools might one day replace the agents/brokers completely exist. This may sound a bit disturbing for the real estate agents who haven't already gone "digital". Interest in real estate mobile application development is not surprising in the era of digitalisation. The speed with which technology changes commands feedback from the customers to provide a user friendly product that absorbs revisions. The solution providers catering to the real estate sector definitely gains from the customer insights.

Technology driven customer relations is not a competitive advantage, rather a strategic necessity in the new media age. Many real estate companies have adopted to mobile application but at Coimbatore a metro city in Tamilnadu, such technology usage by the local sellers/brokers are at the nascent stage. Products can succeed in the market only when the needs/wants of the customers are understood properly and embedded in the product development process (Schilling & Hill, 1998). The feedback from customers will help in structuring a product according to their preference giving way for the local players to hold their share against being unnerved by the market giants (Underwood, 2015). Few mobile application developers with base at Coimbatore are Mindnotix, Mindmade, PG Software and Nishta solutions representing minimal rivalry at the introduction stage of the local software solution providers.

### II. MATERIALS AND METHODS

The market research undertaken works towards helping the solution providers to introduce or improve products based on the real estate customer needs and wants. The research design considered was explorative in nature and the feedback pertains to aesthetics, security, technology, information characteristics, support services and general perception of the customer with respect to the mobile application. The data collection tool was a questionnaire. These feedback forms were administered to the customers of the real estate sector who had used mobile application. The respondents in most of the cases were asked to rank their desires, a case of close ended questions. Closed ended questions also involved Likert type scaling methodologies without employing a neutral option (Garlang & Ron, 1991). The impetus behind not using a neutral response was to avoid the escapism technique of the respondents who actually slightly lean toward a favorable or unfavorable response. With an even number of options respondents are forced to decide whether they think favorably or negatively towards an item.

#### 2.1. The sampling process

A. Population: Coimbatore Real Estate Mobile Application Customers

- ✓ Elements: Real Estate Mobile Application Customers
- ✓ Sampling Units: Residential/Corporate Area then Customers
- ✓ Extent: Coimbatore District
- ✓ Time: May 19, 2015 – May 28, 2015
- B. Sampling Frame: Coimbatore Road Map
- C. Sampling Method: Non Probability Convenience Sampling
- D. Sample Size: 105 decided by ad hoc method
- E. Sample Plan: Non Probability Convenience Sampling adopted eliminated the problem of missing samples and in addition before the questioning session it was ascertained that the respondents had used real estate application.

### III. RESULTS AND DISCUSSION

MS Excel was used to carry out percentage and weighted average analysis. Demographic details (Table: 1) highlight that 66.7 % of the respondents are male while 43.8 % of the respondents earn an income of above Rs.40, 000 per month and majority (32.4%) of the respondents belonged to the professional class. Moreover 33.3% of the mobile application users are of the age group of 25-34. Having chosen an exploratory design to gain insights on consumer inclinations and to avoid invasion of privacy the reflections on demographic details were restricted.

**Table 1:** Distribution of the respondents based on the demographic factors.

Demographic Factors		No. of respondents	Percentage (%)
Gender	Male	70	66.7
	Female	35	33.3
	<b>Total</b>	<b>105</b>	<b>100</b>
Monthly Income	Rs.10,000-Rs.20,000	19	18.1
	Rs.20,000- Rs.30,000	16	15.2
	Rs.30,000- Rs.40,000	24	22.9
	Above Rs.40,000	46	43.8
	<b>Total</b>	<b>105</b>	<b>100</b>
Age	18-25	12	11.4
	25-35	35	33.3
	35-45	26	24.7
	45-55	19	18.0
	Above 55	13	12.3
	<b>Total</b>	<b>105</b>	<b>100</b>
Occupation	Professional	34	32.4
	Business	32	30.5
	Students	10	09.5
	Others	29	27.6
	<b>Total</b>	<b>105</b>	<b>100</b>

The study concentrates on how the respondents perceive the existing real estate application with respect to technical and effectiveness aspects necessitating the Likert type scale. Further the expectations from a new version are gauged by employing ranking methodology.

**Table 2:** Distribution of the respondents based on their satisfaction towards existing technologies and their need for information security.

Technology/Security		No. of Respondents	Percentage (%)
Existing Technologies	Highly Satisfied	26	24.8
	Satisfied	52	49.5
	Highly Dissatisfied	14	13.3
	Dissatisfied	13	12.4
	<b>Total</b>	<b>105</b>	<b>100</b>
Need Information Security	Strongly Agree	52	49.5
	Agree	35	33.3
	Disagree	13	12.4
	Strongly Disagree	05	04.8
	<b>Total</b>	<b>105</b>	<b>100</b>

Security is an innate quality character of a mobile application (Ivan&Zamfiroiu, 2011). The technological aspects as per the present study is all about how the mobile application helps in seamless communication and effective work as perceived by the users and not about resources and tools used to develop the application. Scrutiny of technology and security aspects (Table: 2) identified that 49.5 % of the respondents strongly agree that security is critical for the application and a similar 49.5 % of the respondents are satisfied with the technological aspects of the existing applications.

Information is qualified as good if it is timely, accurate, relevant, worth its cost and just barely sufficient. The criticality of information quality is highly pronounced in a management information system environment (Lee et al., 2002). Information characteristics data (Table: 3) disclose that 41 % of the respondents strongly agree that information updation is necessary and 45.7 % of the respondents agree that lease and property information are indispensable for an application. The content dimension of information verifies the exclusive details required by consumers. Table: 4 reveal that majority of the respondents consider listing of real estate to be of paramount importance as it results in flawless presentation of information.

**Table 3:** Distribution of the respondents based on their opinion towards the need for lease and property details and information updation.

Information Characteristics		No. of respondents	Percentage (%)
Need: Lease and property	Strongly Agree	35	33.3
	Agree	48	45.7
	Disagree	14	13.3
	Strongly Disagree	08	07.6
	<b>Total</b>	<b>105</b>	<b>100</b>
Information Updation	Strongly Agree	43	40.9
	Agree	35	33.3
	Disagree	24	22.9
	Strongly Disagree	03	02.9
	<b>Total</b>	<b>105</b>	<b>100</b>

**Table 4:** Distribution of the respondents based on the information they considered as critical.

Critical Information	No. of respondents	Percentage (%)
Social &Media Feeds	23	21.9
Listing	36	34.3
Special Offers	21	20.0
Descriptions	18	17.1
Others	07	06.7
<b>Total</b>	<b>105</b>	<b>100</b>

The way a mobile application looks and operates i.e. the aesthetics has to appease the users demanding a thorough understanding of the user expectations. Handling service interruptions from customer angle provides efficient customer support. The importance attached to customer needs and wants had ensured the use of ranking scales to identify the prioritisation of customers regarding the mobile application’s design trait and the service support anticipated. Ranking questions compare individual elements to each other resulting in a unique value for the items involved. The design traits assessed are “simple”,” bold”, “intuitive” and “attractive”. Simple design is one which presents no difficulty, bold attributes to distinct and pronounced design, intuitive relates to ease of use and comprehension while attractiveness reflects pleasing and tempting aspect. Table: 5 summarises the rank awarded by the respondents to these aspects of the product.

**Table 5:** Distribution of the respondents based on the priority they attach to mobile application design trait.

Rank \ Design Trait	1	2	3	4	Total
Simple	38	25	20	22	<b>105</b>
Bold	29	28	20	28	<b>105</b>
Intuitive	29	25	35	16	<b>105</b>
Attractive	09	27	30	39	<b>105</b>

Table: 6 indicate the service support a customer perceives as adding value to the mobile application. Property search aids to seek information carefully and thoroughly, mortgage calculation conveys information on interest and rights, updates assists the prompt indication of revisions regarding real estates and estimates relates to the price.

**Table 6:** Distribution of the respondents based on the priority they attach to mobile application service support.

<b>Application Support \ Rank</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>Total</b>
Property search	18	30	33	24	<b>105</b>
Mortgage calculation	26	23	18	38	<b>105</b>
Updates	51	27	12	15	<b>105</b>
Property estimates	10	25	42	28	<b>105</b>

The evaluation made within the mind of the respondents and transformed as ranks are estimated by use of weighted average. The table: 7 and table: 8 has employed a weight of 4 for rank 1, a weight of 3 for rank 2, a weight of 2 for rank 3 and a weight of 1 for rank 4. Weighted average analysis (Table: 7) reveal that the customers prefer simple and intuitive application as these aspects are awarded an average of 2.75 and 2.63 respectively. Additionally table: 8 projects updation of data as the major support service anticipated with an average of 3.02 while property estimates acquired a back seat with an average of 2.21.

**Table 7:** Weighted average of the customer priority with regard to the design of a real estate mobile application.

<b>Design Aspect \ Rank</b>		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>Total</b>	<b>Weighted Average</b>
	Weights	4	3	2	1	-	-
Simple	Frequency	38	25	20	22	<b>105</b>	-
	Scores	152	75	40	22	289	2.75
Bold	Frequency	29	28	20	28	<b>105</b>	-
	Scores	116	84	40	28	268	2.55
Intuitive	Frequency	29	25	35	16	<b>105</b>	-
	Scores	116	75	70	16	277	2.63
Attractive	Frequency	09	27	30	39	<b>105</b>	-
	Scores	36	81	60	39	216	2.05

**Table 8:** Weighted average of the customer priority with regard to the service support expected from a real estate sector mobile application.

<b>Service Expected \ Rank</b>		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>Total</b>	<b>Weighted Average</b>
	Weights	4	3	2	1	-	-
Property search	Frequency	18	30	33	24	<b>105</b>	-
	Scores	72	75	66	24	237	2.25
Mortgage calculation	Frequency	26	23	18	38	<b>105</b>	-
	Scores	104	84	36	38	262	2.49
Updates	Frequency	51	27	12	15	<b>105</b>	-
	Scores	204	75	24	15	318	3.02
Property estimates	Frequency	10	25	42	28	<b>105</b>	-
	Scores	40	81	84	28	233	2.21

The mobile application for the local Coimbatore market is at the introduction stage and is characterised by low sales and relatively less competition. The marketing strategies prescribed for introduction stage emphasis on basic product, increased awareness and inducing trails (Kotler et al., 2012). The analysis of user perspective indicates that security and updation are the critical success factors relating to technological issues. The respondents also pin down simplicity as a key leverage factor with respect to the design attribute. The product improvement strategies that adheres to customer priorities are the one that are successful (Bhuiyan, 2011). It is remarkable that the updates are the key information characteristic as well as the most sought after service support from the mobile application. Communication being a driving force leading to the success of real estate agency its critical feature, updation has to be considered in earnest (Susan, 2002). Real estate mobile application have met the challenge of the industry only half way and feedback at frequent intervals provides for continuous improvement a move towards total quality management. The perception of the respondents forms the premise for strategic actions.

#### IV. CONCLUSION

Technological innovations are playing a significant role in every phase of human life and human interaction with machines has become essential in the service sectors. Smart phones often serve as a go-to source for staying informed (Smith, 2015). Digital environment is now integrating disparate sources of information, at low cost and at large scale, for many new domains. The challenge for real estate entities is to reduce the risk of customers when depending on technology instead of humans. Simple design, fool proof security and prompt information service are the wants and desires of a customer regarding mobile application as understood from the customer feedback.

It is the responsibility of the real estate enterprises to have a separate team to take care of the authenticity and updation of the information published while the solution providers should concentrate on simplicity of the application and security of the information to provide efficient user interface. The winning strategy of a mobile application as prescribed by the consumers of Coimbatore largely rests on “Learning the art of developing simple design that circumvents information leaks”.

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