



# *Circle Technology: Business Strategy*

Course Title: Strategic Planning in Engineering Management

Course Number: ETM 525/625

Instructor: Dr. Ron Khormaei

Term: Winter

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Author(s): Nan Hu, Sean McGraw, Judith Estep, and Corey White

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## Group 1 Term Paper

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## **Abstract**

The purpose of this paper is to document the methodologies and process our group utilized during the course of the evaluation of The Circle Technology and in development of a viable strategy forward for the start-up company.

## **Introduction**

Our group, composed of Nan Hu, Sean McGraw, Judith Estep, and Corey White once assigned the task of developing a viable business strategy for Circle Technology meet the challenge with some skepticism after being introduced to the product. As with any new project, until we started to dive deeper into the processes required, our buy-in into the viability of the product offering was questionable. This initial resistance was minimized as our knowledge of the product, the product team, the strategies to be used by the company, and our potential contributions to develop a long term strategy were developed. This translated into our group eventually “owning” the experience and adapting to the project as if the product offering were truly our own.

## **Methodology**

The methodology the group used was generated after the initial group meeting. Our previously established familiarity with one another made the division of responsibilities a seamless process based on our individual strong attributes. Because of the varied locations and schedules, we choose to meet virtually in group brainstorming sessions and in person only when essential. This process really worked for the group as the members are all senior students within the program and the responsibility of team is understood by all.

## **Data Collection and Results**

Data collection was done by a variety of methods including both primary and secondary methods. The group had the ability to demo the product offering and was able to obtain first hand product testing data from voluntary users. A survey was generated and administered to said users and a variety of markets via Survey Monkey. A quantitative analysis of the survey results

was conducted.

Interpretation of results was done with based on results from potential customers – the information was used to predict market sales. The survey was sent to several people from different industries to include university education, electronic industry, insurance training, and the real estate sales force. The results are summarized:

- Over 60% of respondents are interested in the Wireless LAN technology of our product.
- The results show that more than half of respondents think the product would be useful.
- Approximately 70% of respondents believe that presentations given in an environment without projector technology.

When the survey results were reviewed, it was easy to make an argument for purchasing the product - most of respondents believe Wireless LAN technology is very useful. These results served as the basis for a “compelling reason to buy” in the insurance training market as well as the real estate market. Methodologies from ETM’s New Product Development course were used to make sales forecasts. The results are listed in Table 1.

Table 1

Terms	Remarks	IT values	RE values
N = Number of (annual) purchase	Number of target market segment	97, 953	158, 340
A = Awareness * availability (fractions)	The most conservative awareness of this product	0. 25	0. 25
C def = C definitely	Constant	0. 4	0. 4
C pro = C probably	Constant	0. 2	0. 2
R def = Respondents who vote definitely	From survey results	2	4
R pro = Respondents who vote probability	From survey results	4	4
T = Total respondents	From survey results	7	12
F def = F definitely	Respondents that said definitely purchase / Total Respondents	0. 29	0. 33
F pro = F probably	Respondents that said probably purchase /Total Respondents	0. 57	0. 33
P = Probability of purchase (surveyed)	(C def × F def) + (C prob × F prob)	0. 23	0. 20
Q = Sales (annual)	$Q = N \times A \times P$	5, 597. 31	7, 917. 00

P pu = Price per unit	Constant	\$5, 998. 00	\$2, 399. 00
R = Revenue	$R = Q \times \text{price per unit}$	\$33, 572, 691. 09	\$18, 992, 883. 00

In Table 1, the probability assigned to respondents who will *definitely* buy is 0.4, and the probability assigned to respondents who will *probably* buy is 0.2; the entire market is not considered for calculation purposes. Rather a portion is considered and designated by a market size, A as 25%. Potential sales are calculated as  $Q=N*A*P$ . In the insurance training market, we forecast a total of 23% as the probability of people that will or probably will buy the product. A unit selling price of \$5,998 is assumed to calculate potential revenue, resulting in sales revenue of \$33.5M. For the real estate market, we expected 20% of market employees will buy the product. For this market it was assumed that \$2,399 was the unit selling price. The potential real estate market revenues are: \$18.9M.

## Recommendations

Our recommendations spanned short term markets and product enhancements to long term market considerations and product developments. As mentioned in the lessons learned section, long term market considerations need to be further analyzed to determine their full potential. The strategy defined by our group is described in the product and services roadmap (figure 1).

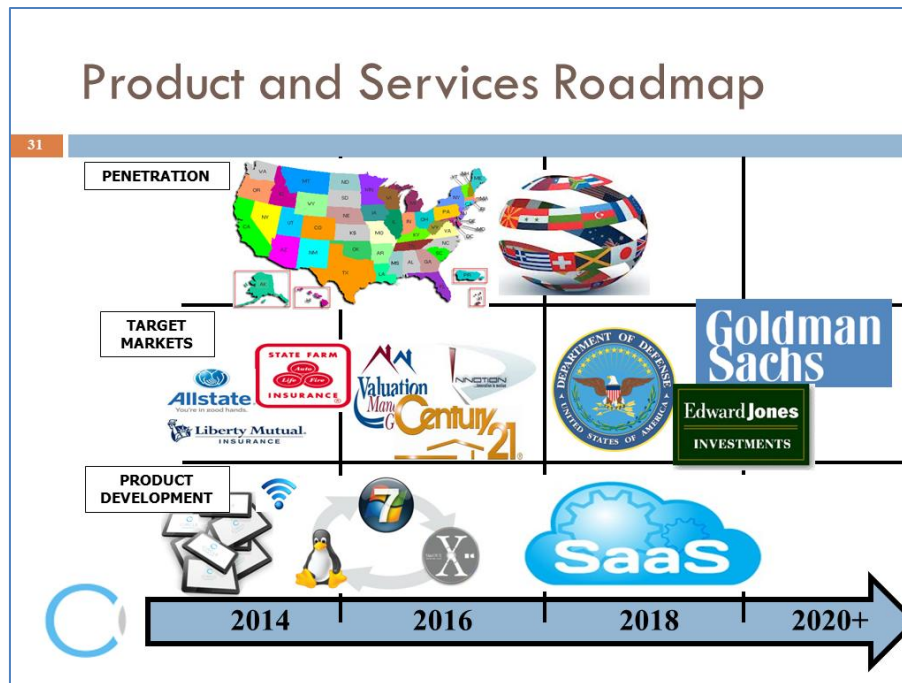


Figure 1: Product and Services Roadmap

**SHORT TERM (0-3 years):** The results of our survey suggest that more reliable WiFi capacity is required as well as increasing the number of tablets that can be used. The initial target market is the training industry and with larger class sizes the norm, more tablets are a necessity. We are in agreement with Steve Hicks' strategy of demonstrating the capability of the product before changing the business model to be an exclusive software provider/SaaS. Therefore, the recommendation is to stay in the US market before expanding internationally. The general consensus was to solidify current competency, with limited expansion (more tablets, WiFi performance, and compatibility with other operating systems) before developing their business strategy.

**LONG TERM (3-5+ years):** Once Circle Technology has established the credibility and reliability of the product, additional development is recommended. This development would include expanding the market to military, high technology industry, and financial services. In addition, our team feels the international market is a prime target – giving presentations in some countries where electricity, let alone internet, is intermittent (e.g. India), this product would provide a valuable service to the international community. Consistent with Steve Hicks' vision, our long term product development strategy would be to become a software based company –

offering the software technology to give presentations anytime, anywhere, on a client's own hardware.

As well as looking at the future product and services offered by Circle Technology, the team thought it would be beneficial to propose a Balanced Score Card (BSC) approach to setting strategy and measuring outcomes. The recommended BSC is provided for reference (figure 2).

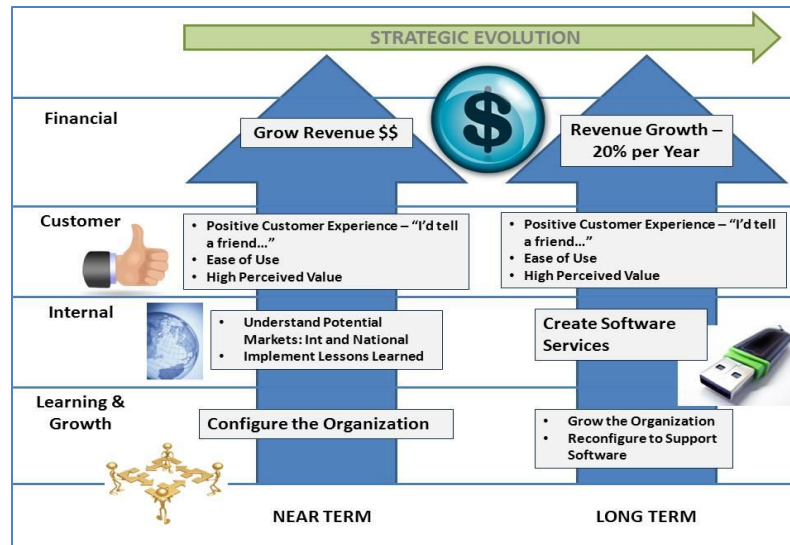


Figure 2: Proposed BSC

## Lessons Learned (LL)

The team worked cohesively to develop a strategic plan for Circle Technology. Our process identified several lessons learned that can be applied when developing strategies for our own organizations or beneficial for future course work. In general, the primary lesson revolved around market identification. Initially, we brainstormed on what could be the potential markets for the product. After we narrowed the likely pool to key industries it was determined that a survey would be an appropriate tool to solicit specific feedback about presentation issues and acceptance for the Circle Technology product, within their industry.

**LL1: Constructing the survey.** We sent the survey out but forgot to ask the respondents to indicate which industry they were representing. Without this information we were unable to assign responses. It was unfortunate because we had a relatively good sample size that had the potential of assigning statistical significance to our results and recommendations. We ended up



revising the survey and asking the respondents to take it again.

***LL2: More time to better define market potential.*** Defining the current and future market potential was a critical step in our project. Due to the time constraints our team felt that the future market assessments were not as thorough as they could have been. Given more time the team would have reached out to other respondents in similar industries as well as expanded the survey to include other markets we thought had potential. As an example, for the insurance training industry, we surveyed one company, Farmers Insurance, and made a huge assumption that other insurance training companies would find the product useful. Also, our group discussed the military as a potential customer but didn't have time to develop this idea further. With regard to market penetration, our team also thought that a long term strategy would be to have an international presence. However, we were unable to determine where and how this would happen, so our recommendation was really no more than it *should* happen.

***LL3: Let the market decide!*** Our group was skeptical about the product potential from the start. However, it became clear after cursory discussions with potential markets that there was a real need for this technology! Had our team been on the executive review board for this product, it would have been shelved and potentially missed out on millions of dollars in sales. In the long run, the market should decide if there is a need. This lesson learned is consistent with the concept of probing – scouting to determine the next product and determining marketing potential.