Disha

Sayantan Choudhury, Kevin Gitonga, Jennifer Heinhorst, Brett Pearce and Mark Vargo

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1. **Summary**

1.1. **Town Schools Overview**

Town Schools is a vocational training institution aimed at providing training opportunities to people in rural India. It was founded in 2008 by Mr. Anshul Pathak, an alumnus of the University of Illinois MBA program, and has since grown and expanded to become a recognized provider of vocational training in the Delhi region. Town Schools currently operates three facilities.

Some of the skills development initiatives associated with Town Schools at the moment include:

- Vocational Training Provider with Directorate General of Employment & Training (DGET)
- Collaborations with the Indira Gandhi National Open University (IGNOU) as a Community College
- Skills Training Partner for Ministry of Rural Development (MoRD)

Program features of Town Schools include:

- Industry demand-driven
- Short-term courses
- Course for students from 8th standard (8th grade) onwards
- Testing by independent third party
- Certification—National Council of Vocational Training (NCVT)
- Nationally and internationally recognized
- Employability—will lead to immediate placement

Town Schools is recognized as a provider of training to students between 14-40 years of age in a variety of streams broadly classified as general skills and trade-specific skills. Some of the areas covered by their training include:

- *General skills development*: Basic English/Communication, Basic Computers, Soft Skills, Personality Development

Town Schools also facilitates employment placements for their graduates. This placement is facilitated through partnerships that Town Schools has established with local enterprises.

Recently, the Ministry of Rural Development awarded Town Schools the responsibility to train 10,000 people from Below Poverty Line families. To meet this new demand, Town Schools has embarked on a rapid expansion program, targeting to establish 30 new schools (or Skills Development Centers) by the end of March 2010, and subsequently scale up to approximately 100 schools by 2011.
1.2. Town Schools Project

For Town Schools to maintain the quality of education and services it provides, it needs teachers who are equipped with proper skills and who understand the Town Schools philosophy. Currently, Town Schools has assigned a team of curriculum developers who are located in Delhi to travel to the different school sites and provide professional development training to both current and newly recruited teachers. Town Schools also conducts regular induction training sessions at a centralized location whenever there is a fresh recruit of teachers. However, we feel that this system is travel intensive, financially draining, and time consuming.

1.3. Town Schools Operating and Business Model

The figure above shows the present Town Schools operating and business model. The Curriculum Resource Center (CRC), located in Delhi, is where the core team is situated. This team plans and designs the courses to be delivered by Town Schools. The team at the CRC also designs the various professional development courses for the teachers and the staff at Town Schools.

The Town Schools model is a hub-and-spoke model. The Delivery Service Centers (DSCs) are remote locations with all of the infrastructure required to conduct the training. These are the primary locations...
where the various trainings are conducted, and the primary contact centers for the students at Town Schools. The DSCs offer the courses designed at the CRC.

The Skills Development Centers (SDCs) are the most remote centers where teacher training will be located. There will be multiple SDCs connected to a single DSC, and several DSCs connected to the CRC. Students will be taught primarily through the SDCs.

The Education Team, therefore, is proposing that Town Schools conduct the training of teachers through an online framework, where the teachers will congregate in a given location (DSCs) to receive instruction via the Internet and an offline computer interface. Our goal in this project is to develop a Learning Management System (LMS) that addresses the training delivery model and that can be used in conducting the online training. We have called the LMS “DISHA.”

Town Schools plans a massive expansion in the near future, opening more DSCs and SDCs, both through the franchisee and a company-operated model.

2. Mission of Town Schools

The mission of Town Schools, as described by the Town Schools founder Anshul Pathak, is to revolutionize vocational education in India by impacting the young population and local communities through employable skill development. Town Schools will lead India's human revolution in a sustainable way that builds capacity in the local context through employable skill development, so that the trained individuals create a labor force to feed the local economy demands.

Mr. Pathak describes the work of Town Schools in terms of “impact score.” To determine impact score, Mr. Pathak asks:

- Did we do our part in trying to equip with skills as many people as we can?
- How many lives have we touched today?
- What is our impact score?

As part of their mission, Town Schools intentionally focuses on the local context. In addition to training and certifying students, Town Schools seeks to be a part of the community, and eventually wants to help with health care and social awareness. The thought is that Town Schools will serve as a community center. Mr. Pathak envisions the community as being the enablers of Town Schools and not the Town Schools’ management.

Town Schools’ investment is in the individual and the community. The Town Schools’ model studies and works within the local context to determine the skills needed, to hire instructors and administrators, and to build trust in Town Schools’ service. Town Schools intentionally works at the community level in an
effort to minimize reverse migration. In their vision, Town Schools evolves into an entity protected and
grown by the community, with Town Schools only working as the initiator.

A corporate business model supports the vision of Town Schools. This is a paradigm shift from the
subsidized model with which Indians are accustomed. Town Schools believes in a “pay and use” model;
the beneficiary must pay or there is no value perception. In addition to the challenge of creating
awareness of the benefits to the local community of a “pay and use” model, Town Schools combats the
historical existence of distrust and corruption in government and business entities.

2.1. Mission Concerning Profits, People, Planet

The government will need to equip its citizens with the necessary skills for the Indian economy to
sustain a steady growth rate into the future. Those living below the poverty line in India will and do
suffer the most from a lack of skills needed to contribute to, and expand, the economy. Without these
skills, they will not be able to benefit from the growing economy. The Indian government has realized
this and has set a goal to train 500 million people, nearly one-half of the population, by 2022. Training
500 million people over the next 10 years, however, will require a considerable number of trainers.
These trainers will also need training. Effectively and efficiently training the trainers, therefore, is an
integral piece of the puzzle. Education Consulting Group provides a profitable, people-oriented, and
environmentally sustainable solution to the problem of training the massive number of trainers needed
to achieve the government’s 2020 goal and beyond.

2.1.1. Profits

Given the number of trainers needed to train 500 million people, the market for DISHA is very large.
Thus, there is a potential for high profits as well. Aside from the large market, the teacher training
interface can make an organization more profitable, due to savings in traveling expenses. Traveling
expenses such as time, fuel, and food can all be greatly reduced by using the teacher training interface,
as an organization doesn’t have to send a trainer from location to location to conduct training in person.
Furthermore, an organization won’t have to hire as many people to train the trainers as it previously
would have, because DISHA can train multiple people, at different locations, at the same time. In
addition, since DISHA is entirely computer-based, it is much more cost effective to store and replicate
the materials used for training; thus it greatly reduces inventory costs.

2.1.2. People

With the savings that can be achieved via the teacher training interface, the organization will be able to
dedicate more resources to developing quality content and instruction. This is very important in
establishing trust in the community. If the organization is able to deliver high-quality training to the
community, then the members of the community will trust the organization and, in turn, continue to use
and recommend the organization’s services. Essentially, our product will allow for members of an
organization, who would have otherwise spent much of their time traveling from location to location to
conduct training, to focus their time on more important things. This will increase the productivity of the
training staff.

2.1.3. Planet
The Education Consulting Group’s teacher training interface has been designed with environmental sustainability as a top priority. The interface is entirely computer-based, which saves trees and eliminates paper waste associated with traditional training manuals and books. It also greatly reduces harmful carbon emissions due to fuel consumption by allowing the user to participate in training without having to travel somewhere to do so. The user can simply participate in the comfort of his or her home. The computer-based interface also reduces the need for the trainers of the trainers to travel from location to location to train the new trainers. Furthermore, the distribution of the interface can be done via the Internet, reducing carbon emissions due to fuel burned by delivery service vehicles.

3. Situation Analysis

3.1. Internal Strengths and Weaknesses

Internal Strengths

- Town Schools is a financially sound organization and is capable of financing the implementation of a learning management system to support its expansion program.
- Town Schools has been providing vocational training and skills development to students in rural India for at least two years. It also partners with other learning institutions that provide vocational education and skills development, and hence has a wealth of experience and expertise in the field.
- Town Schools' team of curriculum developers is comprised of highly qualified individuals with a wealth of experience in vocational curriculum development. On the average, the team is comprised of individuals with about 20 years' experience per person.
- In each of the DSCs, there is a well-equipped computer lab fitted with the modern computer hardware needed to support online learning. These labs are accessible to all students, faculty, and staff of the Town Schools family.

Internal Weakness

- Town Schools lacks the teacher capacity needed to meet demand in its current expansion plan. Therefore, more teachers who are highly skilled and who believe in the philosophy and mission of Town Schools will be needed soonest possible.
- Despite years of experience in developing employable skills at the vocational level, Town Schools does not have any experience with conducting instruction in online environments or running online programs. A lot of investment needs to be made to develop this capacity, mainly through internal training of staff and updating instructional material to suite e-learning environments.
- Despite expertise in skills development and developing vocational training material, our curriculum developers do not have a lot of experience in designing curriculum for online instruction. This is an area that the Town Schools administrators intend to seek expertise in and bring in talent.
- Town Schools instructors do not have experience training in online environments. New investments need to be made in the development of this capacity.
- Town Schools does not have the technical expertise to develop and maintain an online training system. There is need to invest in bringing in software developers and technicians who will maintain the Town Schools learning management system.
### INTERNAL STRENGTHS

- Financial backing
- Experience and expertise in vocational training and skills development (in their other schools)
- Highly qualified and experienced administrators
- Highly qualified and experienced curriculum developers
- Existing infrastructure--computer labs

### INTERNAL WEAKNESSES

- Lack enough teacher capacity to expand
- Lack experience running an online program
- Curriculum designers lack experience designing online instructions
- Trainers have no experience conducting online instruction
- TS does not currently have someone to maintain the system (need to hire an expert)

#### 3.2. External Opportunities and Threats

**External Opportunities**

- The Town Schools expansion initiative is very timely and in line with India's national training policy/initiative. The government of India is planning to train over 500 million people by the year 2020, and in 2010 alone it will invest billions of rupees in employable skills development. This makes Town Schools' initiative very timely.
- The government of India is providing funding for skills development training to institutions and to students in the form of tuition reimbursements. This move aligns with the Town Schools initiative and provides an incentive to recruit students to join its programs.
- Town Schools is working in collaboration with many other entities both nationally and internationally, such as the Indira Gandhi Open University and the University of Illinois Sustainable Marketplaces research laboratory. These networks give Town Schools the positive publicity needed to popularize their programs and also provides a sense of credibility to potential collaborators, both nationally and internationally.

**External Threats**

- By embarking on such a rapid and broad expansion strategy, Town Schools risks the potential of tainting its image in the event that this program fails. This would be detrimental to other programs offered by Town Schools and its credibility in the market.
- There are other organizations currently providing vocational training in the region, some of which may have bigger programs than Town Schools. These would be a threat to Town Schools if they decided to offer their training online; hence the need for Town Schools to embark on the initiative as soon as possible.
- Internet connectivity in India is not as stable as in most of the developed world. This may be a major challenge to sustaining an online learning system. Town Schools is intending to make a major investment in bolstering its Internet connectivity; however, it has also devised a product that has the capability of working offline in the event that Internet connectivity is ineffective.
- Online learning is a new phenomenon to many in India, and especially to the populations in the rural parts of India, who are Townschool's primary market. This means that introduction of an online learning system will require a high level of sensitization to get the rural populations to buy in to this
technology, and also to establish themselves as a valid training alternative to the traditional classroom approach.

<table>
<thead>
<tr>
<th>External Opportunities</th>
<th>External Threats</th>
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<tbody>
<tr>
<td>• Expansion opportunities aligned with the national training policy/initiative</td>
<td>• Failure in this expansion would taint the image of Town Schools</td>
</tr>
<tr>
<td>• Government has availed funding for training (tuition reimbursements for students)</td>
<td>• External competition—there are other institutions providing vocational training in the area</td>
</tr>
<tr>
<td>• Could get publicity and credibility by collaborating with the University of Illinois</td>
<td>• Lack of reliable Internet connectivity</td>
</tr>
<tr>
<td></td>
<td>• Introduction of online learning will need a high level of sensitization to get acceptance as a valid training alternative</td>
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### 3.2.1. Macro Environment

The educational system in India seeks to provide education for all students through the twelfth standard, or twelfth grade. Even though the education is provided, the quality of instruction, the qualifications of the teachers, and the available resources differ greatly. Many students do not continue in school to the twelfth standard. The government has board exams at the tenth, eleventh, and twelfth standards. If a student does not pass the board exam, the student does not continue with public schooling.

In addition to public schooling, many private and nonprofit schools exist. Many parents have options of sending their children to a school that teaches in the regional language or English language. Public school has little cost associated with it, but many parents will use their precious meager resources to support learning through tutoring or paying tuition at private schools.

The government, parents, community members, and students place a premium on education. There is an overwhelming belief that education is the way to a better life. It is common that parents support their children until the final completion of education, which for some students may be until their mid-twenties. Families want children to do well in education and make choices to support the best possibility of success in continuing education through the twelfth standard and studying at a university.

India has a young population and a substantial percentage of citizens unemployed or underemployed. India has a huge number of potential laborers, but many do not have the employable skills needed to enter the formal work sector. The most accepted means to gain education to be employed is to graduate from a university. Vocational Training Institutes exist in India, but these Vocational Training Institutes are not revered or trusted in the same way as universities are, even if the university is considered of poor quality.

The following excerpts are from a March 31, 2010 article titled *Plugging the Skills Gap* on [www.IndiaTogether.com](http://www.IndiaTogether.com). The author, Megha Aggarwal, provides a perspective of vocational education in India and the need for policy changes.
According to the Modular Employment Skills (MES) initiative by the Directorate General of Employment and Training (DGET), only about 2.5 million vocational training seats are available in the country, whereas about 12.8 million people enter the labour market every year. The large gap is partly due to the lack of high-quality VET institutions. However, there is also another reason; the student population does not perceive VET as an option that gets them what they aspire for. An optimal strategy has to address both why more Indian students are not taking up vocational education, as well as aim to correct the ineffectiveness of existing providers to attract and equip motivated students with skills to become part of a productive workforce.

There are close to 7000 ITIs, where training is imparted in 128 trades. The period of training varies from 6 months to 3 years, while the entry qualifications are academic and vary - from those who have passed Class 8 to 12. These institutions are widely perceived - both by students and the industry - as being ineffective and out of touch with industry needs. This has led to a mass-churn of graduates who are not needed by the industry and are not equipped with the basic technical know-how of their trade and as a result are becoming a part of India's vast unemployment pool. At the same time, the government is encouraging private sector participation in the form of Public-Private-Partnerships (PPPs).

At this stage, as the next new wave of vocational education and training approaches us, we need to ensure that we do not repeat mistakes from the past. This is all the more critical as the Government is planning to invest significant resources to scale up VET in India. It is critical that we step back and ask ourselves what key principles policy makers have to keep in mind while developing a model for the "perfect" institute for vocational education, which will be able to deal with both demand and supply hurdles faced by skills-based training today.


### 3.2.2. Market (for Product) Size and Growth Potential

Our market segmentation for DISHA consists of:

1. State and central government training institutes (ITIs)
2. Private vocational training institutes
3. Small and medium businesses
4. Indian universities

The largest market for DISHA is the market for state and central government training institutes, which are commonly known as ITIs. Combined, there are over 7,000 such institutes. The growth potential for
DISHA among these institutes is large because of the interconnectedness and interdependence among them. While adoption may be slow in the beginning, if these early adopting government institutes have success with DISHA, other government institutes may follow in large numbers. The ideal situation would be a government mandate that all training institutes use DISHA for their distance training needs as well as training their instructors.

The second-largest market for DISHA is the market for private vocational training institutes. While the market is relatively small at the moment, the government’s goal to train 500 million people by 2022 is an indication that the market will expand in the future. Town Schools, however, will likely face problems getting other private vocational training institutes to adopt DISHA, because they are competitors. Therefore, the growth potential is limited.

The third largest market for DISHA is small and medium businesses. It's estimated there are 35 million small and medium businesses in India. DISHA will be used for employee training in this market. DISHA’s adoption in this market will be limited; however, the technological capacity of the businesses and the need for employee development training will propel DISHA into this market.

Finally, the smallest market for DISHA is Indian universities. While there are over 300 universities in India, not all universities are engaged in distance learning. Furthermore, many universities may have proprietary or established systems for distance training. However, as DISHA matures and gains market credibility, it may be possible to capture about five percent of the market, which would amount to about 15-20 universities.

### 3.2.3. Competition

There are various e-learning softwares in India. Some of them are matured enough to be considered as a Learning Management System. But we would like to consider and compare ourselves with the best available in the market.

After analyzing the competition, we have come to understand that DISHA enjoys a distinct competitive advantage as compared to the other Learning Management Systems that are available in the market. DISHA happens to be the only e-learning solution for training teachers, which can be tweaked to train students as well.

We analyzed the two closest competing solutions – WIZDOM from Blueapple and Microsoft Learning. Neither of them, however, are focused on vocational training or aimed training the low literate population of India, particularly to make them teachers. Moreover, DISHA, with its simple but robust architecture,

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has a clear and distinct advantage over its competition. The ability to continue with the training in an offline manner is what makes DISHA an exceptional product.

### 3.2.4. Customer Information

Town Schools’ mission is to train citizens from the local context with employable skills to feed the needs of the local economy. DISHA provides a mechanism to train instructors through an e-learning format.

The customers of Town Schools are local citizens. The customers of DISHA are other organizations needing an e-learning mechanism to train instructors, personnel, or even students. Other vocational training institutes are the most likely customer candidates, but the interface is adaptable to multiple contexts as a training tool or learning tool.

The India trip exposed us to a nonprofit vocational training program, nonprofit organizations working in the areas of health and sanitation, highly technical companies, and products being developed in Indian Universities. Beyond our visit to Town Schools, these other experiences provided the team with insights into the application of the Learning Management System interface. Each of the before-mentioned entities could utilize the interface as a training tool or as a learning tool, depending on the context and the need.

DISHA serves the needs of distance or remote learning where people are unable to travel to a central location for instruction. The Indian landscape is vast, and transportation is time-consuming and expensive. The benefits of DISHA are found in cost savings, scalability, and deployment. The interface can be used through an internet connection or as a stand-alone interface working from a flash drive or computer hard drive. The system is customizable and provides an organization with a means of delivering instruction in a controlled, individual-specific, high-quality manner through e-learning.

### 4. Field Research and Product Development

#### 4.1. Learning from Virtual Immersion

The fall course virtual immersion taught the team about the subsistence marketplace context, the people living in this context, and the companies working to increase their brand in this context. Transcripts were analyzed, case studies were read and discussed, videos of real-life subsistence marketplaces were watched, and course content kept our focus on the subsistence marketplace context.

New understandings developed for the team in terms of:

- Educational realities of people living below the poverty line
• Spending habits and income generation within the subsistence marketplace context, including the relationships that are formed between the seller and the buyer
• The role self-help groups play in the lives of women in the subsistence context
• The entrepreneurial spirit that is prominent in the subsistence context

4.2. Idea Generation and Screening Before Trip

As a team, we spent weeks discussing ideas and possibilities for our project. Initially, we brainstormed broad concepts and possibilities, and then grouped these ideas into themes. Once established, the themes were discussed to determine how realistic the options were, given the scope of the project. Our initial idea generation consisted of ideas that fit into four categories: Delivery Method, Recruitment, Curriculum, and Student Training. Table 1 shows the concept breakdown by category.

<table>
<thead>
<tr>
<th>Delivery Method</th>
<th>Recruitment</th>
<th>Curriculum</th>
<th>Student Training</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobile van</td>
<td>Use of local media</td>
<td>Pictographic-based curriculum</td>
<td>E-learning</td>
</tr>
<tr>
<td>Educational gaming</td>
<td>Local representative</td>
<td>Business incubator</td>
<td>Use of illustrations, puppets, and/or animations</td>
</tr>
<tr>
<td>Use of existing technology (mobile phones, ATMs, communal computers)</td>
<td>Virtual business simulation</td>
<td>Physical training manuals</td>
<td></td>
</tr>
</tbody>
</table>

*Table 1: Initial concept generation*

4.2.1. Discussion of Evaluation Criteria

We used the following criteria and rationale to evaluate our initial concepts:

Criterion - *In line with Town Schools’ goals*

Rationale - We feel that it is important for our concepts to be in line with the goals of Town Schools to develop a product that will be capable of helping the organization expand its operations and helping it to deliver quality vocational education to its students.
Criterion - *Replicable*

Rationale - We feel that it is important for the concept to be replicable, because Town Schools will be expanding its operations in the near future. The organization will need the ability to use the product at multiple locations within the organization.

Criterion - *Long product lifecycle*

Rationale - A long product lifecycle will help to keep the cost of the product down, which is important as Town Schools begins to expand.

Criterion - *Accessible*

Rationale - Town Schools serves people of varying levels of education and literacy; therefore the product must be able to accommodate them.

Criterion - *Low investment*

Rationale - Town Schools is a young organization and doesn’t yet have the money to make a large investment.

Criterion - *Financially sustainable*

Rationale - This refers to the product’s ability to generate or save Town Schools money. The financial sustainability of the product will help the entire organization remain financially sustainable.

Criterion - *Environmentally sustainable*

Rationale - The product’s effect on the environment should be minimized.

### 4.2.2. Discussion of Ranking

Each concept was given a score from 1-5 (1-lowest, 5-highest) for each criterion. The points were then added up for each concept to give the total score. Based on our evaluation, e-learning was ranked the highest with a score of 28, followed by educational gaming with 27, and pictographic-based curriculum with 26. See Table 2 for the results.
4.3. Market Research

Our market research reveals that most of the e-learning products are targeted at an educated and literate audience with ample computer skills. We started with the basic premise that DISHA is targeted at training people with low computer skills. Hence, DISHA is less textual in its navigation as compared to the competition.

Our market research also reveals that our competition focuses a lot on enterprise-wide learning, while DISHA is focused on individual learning. Moreover, DISHA is aimed to train people in the vocational training sector. In this sector, as of now, there is not much competition. But with the increased government focus and investment in this sector, we predict that the IT biggies in India will target this sector and develop e-learning suites. As of now, DISHA is the only player in this segment, and we would want to become the market leader in case of increased competition in this sector.

4.4. Learning and Reflection from Field Research

The trip to India provided valuable insights to our project. The interviews, visits to organizations, discussions with local citizens, and direct physical contact with Town Schools furthered our understanding of the project and the local context. Different themes emerged from these experiences. The needs, desires, and capabilities of families, communities, social organizations, and the local and national
government are interwoven in a way to produce a platform for social and economic transformation. The following information describes what we learned during our emersion in the local contexts in India.

Families place an unbelievable amount of importance on education; education is the first priority for their children regardless of their social and economic status. The future generation is charged with the responsibility of changing the family's existence for the better. There is an overwhelming belief and conviction that education holds the key for a better life. Families and communities have high ambitions for the next generation, and financially invest in this possibility even when resources are meager.

The national government of India strongly focuses on the social and economic advancement of India to a degree possibly unparalleled in other countries at this time. Numerous strategic initiatives exist and are pushed by the government for long-term development. Through various interactions, individuals discussed the government initiative to train 500 million rural citizens with employable skills by 2022. The government is providing funding to organizations to take on the task of making this a reality. In addition, the government established the structure of self-help groups for people to come together and create greater economic means through this joint, collaborative, group accountability structure. The power of the self-help groups is evident through the empowerment this structure brings to the people in the group. The empowerment is economic, social, and individual.

Trust is an issue that hinders the progress of the governmental initiatives. People expressed distrust for the government and for organizations requiring payment for services. The Indian psyche appears to have evolved into a distrustful state of authority, which may be a condition of post-colonialism, government propaganda, or of inequitable government interactions. This history of poor trust in government requires that organizations must spend tremendous efforts to convince people of the benefit of the service and to establish trust with the local community. Some people explained the government used to tell citizens that certain services and products were "free," though the reality was otherwise, due to unavailability of infrastructure.

Despite the government initiatives, there are government policies currently in place that do not support the initiatives to the extent they could. In the area of education, the Indian government operates with weak policy. To date, there is an absence of national teaching standards and a minimal level of education for the public school teachers; public school teachers are rotated to different buildings every three years. A systematic governmental structure is not in place to address the needs of the students who do not pass board exams. This situation is compounded by the fact that the average citizen is not aware of the training opportunities available outside of traditional schooling.

Social organizations fill in the gaps the government is not able to fill; however, the gaps are numerous and wide. The national government is unable to meet the needs of such a large population in a meaningful, expedient manner. The social organizations related to our project are those providing education and vocational training. The social organizations must put great effort into acquiring the students for their program, due to trust issues and family resistance to a different way of approaching education and skill acquirement. Beyond curriculum, these social organizations are working on soft skills and acquiring placements for their graduates. Town Schools and the CAP Foundation stressed that trust is a huge barrier to success in the local context. The philosophy of an organization shapes the interactions
with, and recruiting of, prospective students. The CAP Foundation is free to students and embraces an intimate counseling model to retention, schooling/skill acquisition, and placement of students. Town Schools embraces more of a business model, has the students pay for services, and believes that one must pay for something to value it.

Local context and trust do matter. From all our emersion learning, the two most important variables to the success of the Town Schools organization rest on the issues of local context and trust. Beyond this, the recruitment of students and hiring of staff from the local area is challenging. For our project, the learning about the local context, the education system and available technologies, the role of social organizations, and government issues influence our design and business plan. We must use an "emersion lens" to focus our thinking and design.

4.5. Concept Generation and Evaluation After Trip

Based on the knowledge and insights we gained from our trip to India, our group developed four more concepts that were more detailed than those previously generated. Those concepts are:

1. Business incubator
2. Expansion of current Town Schools model to include counseling
3. Teacher training modules
4. Teacher training interface

4.5.1. Discussion of Evaluation Criteria

We used the following criteria and rationale to evaluate our initial concepts:

Criterion - Meets the immediate needs of Town Schools

Rationale - We feel that it is important for our concepts to meet the immediate needs of Town Schools that is a method to quickly and effectively train teachers as they rapidly expand their operations.

Criterion - Is feasible to complete business plan and product design in spring semester

Rationale - The scope of our project must not be too wide, given the short amount of time we have left in the semester.

Criterion - Can be developed within a short time frame

Rationale - The expansion of Town Schools’ operations in the very near future necessitates that our product be developed quickly.
Criterion - *Can be implemented quickly*

Rationale - For our product to be effective and become a part of Town Schools, it should be present before or as they are expanding their operations.

Criterion - *Helps to expedite the scaling up of operations in terms of teacher training*

Rationale - While this criterion is very specific, teacher training is an immediate need; therefore, our products need to be assessed in terms of it.

Criterion - *Can be easily updated*

Rationale - Our products need to have the ability to be easily updated with new inputs (information, methods, concepts, etc.).

Criterion - *Easy to maintain*

Rationale - Town Schools will eventually be a very large organization in charge of training and teaching many students; therefore, maintenance of any product needs to be as easy and intuitive as possible.

Criterion - *Easy to monitor*

Rationale - The ease of monitoring the operation of the product and the users’ progress while using it is important, as it will help to identify issues and areas for improvement with the product.

Criterion - *Easy to evaluate*

Rationale - Evaluation here refers to evaluating the results of product usage. Ease of evaluation will help to more quickly and effectively identify issues with the product and also identify areas for improvement.

Criterion - *Maintains quality of education for students*

Rationale - As Town Schools rapidly expands its operations, it must consider how the expansion affects the quality level of the education it is providing. Our product should, at the very least, help to maintain the standard of quality for education that Town Schools provides.

Criterion - *Can be controlled from a central location (CRC)
Rationale - The product should have the means to be controlled from a central location to ensure quality and consistency.

Criterion - *Direct interpersonal communication is achievable*

Rationale - When possible, the product should allow for direct communication between users.

Criterion - *Low investment*

Rationale - Town Schools is a young organization and doesn’t yet have the money to make a large investment.

Criterion - *Builds trust in community*

Rationale - For the organization to be successful, it is very important for Town Schools to build a relationship based on trust with the members of the communities that it serves. Our product should help to build trust.

Criterion - *Develops skills of the user*

Rationale - Since Town Schools is in the business of vocational training, our product should help to develop the skills of the user.

Criterion - *Financially sustainable*

Rationale - This refers to the product’s ability to generate or save Town Schools money. The financial sustainability of the product will help the entire organization remain financially sustainable.

Criterion - *Long product life cycle*

Rationale - A long product life cycle will help to keep the cost of the product down, which is important as Town Schools begins to expand.

Criterion - *Accessible for people with varying levels of literacy and education*

Rationale - Town Schools serves people of varying levels of education and literacy; therefore, the product must be able to accommodate them.
4.5.2. Discussion of Ranking

Each concept was given a score from 1-5 (1-lowest, 5-highest) for each criterion. The points were then multiplied by the weight assigned to the criterion (1-lowest, 3-highest) and added up for each concept to get the total score. Based on our evaluation, the teacher training interface had the highest total (157), followed by the teacher training modules (138), expansion of current Town Schools model to include counseling (133), and finally the business incubator idea (108). Given the results, the teacher training interface seemed to be the best idea. See Table 3 for the results.

<table>
<thead>
<tr>
<th>Concepts</th>
<th>Weight</th>
<th>Business Incubator</th>
<th>Expansion of Current Model to Include Counseling</th>
<th>Teacher Training Modules</th>
<th>Teacher Training Interface</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meets the immediate needs of Town Schools</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Is feasible to complete business plan and product design in spring semester</td>
<td>3</td>
<td>1</td>
<td>5</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Can be developed within a short time frame</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Can be implemented quickly</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Helps to expedite the scaling up of operations in terms of teacher training</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Can be easily updated</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Easy to maintain</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Easy to monitor</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Easy to evaluate</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Maintains quality of education for students</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Can be controlled from a central location (CRC)</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>直接人际交流是可以实现的</td>
<td>2</td>
<td>4</td>
<td>5</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Low Investment</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Builds trust in community</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Develops skills of the user</td>
<td>3</td>
<td>5</td>
<td>4</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Financially sustainable</td>
<td>3</td>
<td>4</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Long product life cycle</td>
<td>2</td>
<td>4</td>
<td>3</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Accessible for people with varying levels of literacy and education</td>
<td>3</td>
<td>3</td>
<td>4</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Total Score</td>
<td>108</td>
<td>133</td>
<td>138</td>
<td>157</td>
<td></td>
</tr>
</tbody>
</table>

Table 3: Evaluation criteria after India

4.6. Concept Narrowing

When we first began brainstorming our concepts after the trip to India, we looked at multiple areas on which we wanted to design our product. First, we wanted to design a student-training program that would focus on developing soft skills such as confidence building, interpersonal skills, and interviewing
skills, with the intent that these skills would help the students to be able to market themselves upon graduating from Town Schools.

The second focus in our concept generation process was the **training of teachers**. In view of Town School’s intended rapid expansion, we saw the need to invest in the training of teachers so that they could be well equipped with the knowledge, skills, and attitudes they need to meet the new demands of an expanded Town Schools. This has to be done if Town Schools wishes to maintain the high quality of their instruction. Another need we observed at this stage was that Town Schools would have to increase their capacity of teachers if they are to sustain this expansion. However, we viewed this as a proposition we would make to the administration.

The third concept we considered was the **modification of the current Town Schools training model** to include new features such as counseling, entrepreneurship education, professional mentoring, and linking current students with the alumni of Town Schools. These ideas emerged after our interviews in India with people who were running similar programs, such as the CAP foundation, which had incorporated counseling into their training models.

After reviewing these three concepts, we decided to narrow our focus further, based on the reality of the current need and what we perceived as the most urgent need for Town Schools.

Following deliberation over the above-stated concept propositions, we brainstormed on what we thought was the most current or urgent need. We settled for the Training of Trainers/Teachers option as our priority concept. Additionally, this can be defined as the professional development of teachers. This training concept focuses on current teachers and the new teachers recruited to meet the demands of the expansion and new schools creation.

Within the professional development option, we identified three areas of focus for our training.

1. **Distance Education Model**—This model facilitates the training of teachers by the curriculum development team from the CRC site in Delhi. It allows the team to reside at the CRC and not physically move to the DSC or SDC where the teachers are located. The idea here is to establish a framework through which interaction can be conducted via the Internet, using media to support both synchronous and asynchronous interactions. We argue this saves on commuting expenses and enables Town Schools to conduct instruction in different locations at the same time, hence making them more efficient. Under this option, we discussed the possibility of having instruction content organized into modules accessible by teachers in downloadable formats. These downloads can be saved onto CDs, USB portals, or an Internet server such as a Learning Management System (LMS).

2. **On-The-Job Training Model**—This model trains teachers as they continue with their teaching. This model involves peer-reviewing mechanisms, enabling teachers to get feedback from peers regarding the actually delivery and method of instruction. Additionally, feedback can be received from supervisors and tracked by the curriculum development team as a way to identify skills gaps. This feature allows for the supervisor to individualize future training.
3. **Continuing Education Model**—This approach involves building on the teachers' existing knowledge. We understand the immediacy and pressure created by the need to train so many teachers within a limited time frame. Due to this, we propose an approach allowing teachers to get training as a way of improving their work. Continuing education work can be regarded as professional development or perquisite development for newly recruited teachers.

4.7. **Core Need and Final Concept Evolution**

Based on the needs of Town Schools as an expanding organization and the immediacy of recruiting teachers, we decided the most effective way to address these issues was through a computer interface. This interface will serve as a way to train teachers over long distances while keeping consistent the quality of education. After making this decision to focus on a teacher training interface, we analyzed the core needs of the user.

We divided the needs of our concepts into three main categories: 1. The teachers'/trainees’ needs, 2. The curriculum development team's needs, and 3. The sponsor's needs (Anshul's needs).

1. Teachers'/trainees’ needs. We focused on the needs that we believe the learners using the interface may be interested in. These needs include:
   - Easy navigation/usability of the interface—pictograms/graphics
   - Ability to access course material/resources
   - Ability to network with other teachers
   - Ability to work offline

2. The needs of the curriculum development team. This is the team responsible for developing the entire curriculum used in Town Schools. This team is primarily located in the Curriculum Resource Center (CRC) in Delhi; however, since they are also responsible for delivering the training, they often travel to the Delivery Service Center (DSC) or the Skills Development Center (SDC) to conduct training. To facilitate this role, some of the needs identified include:
   - Ability to support the course content
   - Can facilitate positive engagement with and among teachers in different locations. They can exchange ideas.
   - Is easy to edit (can be done by either the curriculum development team or the teachers asynchronously)
   - Students can upload assignments
   - It standardizes training in the DSCs

3. The sponsor’s needs (Mr. Anshul Pathak). From the discussions we have conducted with Mr. Anshul, he has been emphatic about what he expects from this product. Some of the needs he listed include:
• The system should be easy to learn (how to use).
• It should not be too expensive.
• The system should be designed in a way that is sustainable. It can be maintained in-house.
• It should require a reasonable amount of bandwidth to run.


Figure 2 - Sign in screen
Our solution to the issues in current education presented above is a digital teacher training interface. This is a stand-alone computer application that serves as a delivery method for current Town Schools curriculum across all of Town Schools’ infrastructure. This application fills current needs in several ways. The first is to fill the need of distance teacher training. The second is to train teachers effectively, quickly,
and consistently. The third need addressed by this interface is the need to empower teachers so they can teach the most effectively, using technology and traditional methods as well as develop themselves as teachers.

This teacher training interface is a distance-learning tool. It is installed on the available computers at the DSCs. Teachers working for Town Schools who are being trained then come to these learning centers and log into the computer program. With this program, teachers can complete activities and do work and readings through the program. Training is also administered by external tools linked to the sidebar on the left of the screen. These tools include videoconferencing with trainers, email, and discussion boards, allowing interactions between trainers and trainees. This system allows the trainers to be centrally located, yet be able to personally interact with trainees. This saves money on transportation and time.

Having a distance-learning solution allows for more effective, faster, and more consistent training across the expanding Town Schools network. The most significant way to maintain teaching quality is via consistent teacher training. Having a distance-learning program to enable the training of multiple teachers in multiple locations, in the same manner, by the same instructor, allows the organization to have tighter accountability on the quality and consistency of the trainings. The speed of training teachers is greatly increased by this delivery method. With this system, teachers can proceed on their work at their own speed while still interacting with trainers via the tools on the sidebar. This also leads to greater effectiveness in training. Time saved, simultaneous and non-simultaneous training, and digital tools facilitates this type of training system. The built in “Sync Work” option, located on the left sidebar, allows teachers to save their progress, their personal information, and study modules to the hard drive and/or portable media storage device. Additionally, the «snych work» updates an online index file, allowing trainers to access, grade, and give feedback on work submitted. This ability to work at your own pace, and save your work when you are ready, makes for more effective teaching and learning.

All these issues integrated into the design of this interface will empower the user. It respects the time and efforts of the trainers who developed the curriculum by providing a more effective delivery method for the curriculum. It also empowers the teacher by giving them effective training tools in a variety of media in a user-friendly way. This is not something that will take hours to learn how to use. Anyone with basic computer literacy can interact with this program and benefit from the content.

All these issues are summed up in the teacher training interface. This program is designed in a culturally sensitive way, taking into account the trainers, teachers, and the teachers’ backgrounds and language issues. Help screens, options menus providing options to change language from English to Hindi, and simple login screens complete the computer application. Colors and shapes easily distinguish among items while also relating back to the colors and shapes in the Town Schools logo.
4.8. Technical Specifications

DISHA will have a component-based architecture that can be customized at the service layer. The two main services that can be provided are:

- Professional development of the present team of teachers
- Training of future teachers

In Figure 5, the present baseline architecture is a collection of different modules working independently of each other. The modules can be utilized as folders, each with a unique set of parameters for particular areas of training. These modules will reside in a layer called the Base Layer.

![Figure 5 - Base Layer](image)

To create individualized training plans, these modules are loosely coupled at a layer above the Base Layer called the Services Layer. The Services Layer is the layer that interacts with, and provides the basis of, planning and conducting the training. The Services Layer is the layer that will be interacting with the user to provide the training. The Services Layer is shown in Figure 6.
One of the aspects of the Services Layer is an index file; the index file contains the linkages between the various modules to make up a training plan for a group or an individual. It is through the selection of various training modules that a customized training is created for each user via the index file. The index file contains other features offered by this teacher training interface. There can be multiple index files with a unique identification for each assigned training module. The index file also acts as the status file that flags the extent to which the training has been completed.

The index file is downloadable; the downloaded index file also downloads the contents of all associated folders. This action contributes to the ability of the interface to continue to provide the training even in the absence of Internet connectivity. So while training can continue in the offline mode, the next time the device on which the index file and the related contents has been downloaded, the interface automatically synchronizes with the server online and updates the index file on the server.

The overall architecture is shown in Figure 7.
Benchmarking:

Online training tools are an essential aspect to our teacher training interface. Benchmarking was necessary in choosing tools in the areas of learning management and web conferencing systems. In both categories, the applications chosen needed to be inexpensive or free and easy to use for the teachers as well as the programmers.

4.9. Prototype

An online prototype to demonstrate the basic function of DISHA has been developed. The prototype can be accessed at the URL below:

http://www.wix.com/dishalms/disha
5. Marketing Strategy

The teacher training interface product requires Town Schools to adopt a dual marketing strategy; the product can be marketed to both an internal and external market. The structure and design of DISHA addresses the needs of the initial audience, which is the internal market of the Town Schools organization to be used for teacher training. The secondary market is the external market. This external market targets the industry to gain industry-wide acceptance and demand. The demand of the interface teacher-training product opens a potential revenue stream from the distribution of the interface to the industry. Marketing to the external market requires Town Schools to develop and implement an industry-wide marketing strategy.

5.1. Product Positioning and Target Market Selection

DISHA is being positioned as a training tool not only for teachers, but for students as well. The first target segment will be both state and central government vocational training institutes (ITIs). The second target segment will be private vocational training institutes like Town Schools. The market can then be extended to small and medium business. DISHA can be used for employee training programs, providing tremendous cost savings. Finally, the market can be extended to all universities in India as a way to provide distance-learning courses. DISHA is a B2B product, hence Town Schools will have to adopt marketing initiatives suitably.

DISHA will be positioned as a tool that will not only boost distance learning and training, but also will lead to high amounts of cost savings for the adopting organization. DISHA will be positioned as an enabler of distance learning and training, thus providing long-term benefits for the organization.

These target segments were selected based on our market research concerning the existing need for such an interface in all vocational training schools engaged in meeting the needs established by the Ministry of Rural Development. As a leader in this segment, Town Schools developed this interface with the hopes that other training institutes utilize it to train its teachers. In this way, the larger goal of the government to train the population can be met.

5.2. Product Promotional Strategy

DISHA is a B2B product. Hence, the promotional strategy will have to be done using the various options available in marketing a product to organizations. The marketing will primarily be done through an effective sales team charged to reach out to the potential customers and then generate leads.

Town Schools will also organize workshops and invite target customers and provide demonstrations of DISHA. This enables Town Schools to understand the improvement opportunities in the interface and how it can be made more effective and comprehensive for various training purposes and methods.
The promotional highlights will consist of the various advantages the interface delivers in terms of training to the adopting organization. The points highlighted are mentioned as follows:

- Cost savings by adopting the distance learning method
- Go green by reducing the dependency on paper and hence reducing paper waste
- Ability to position instructors in a central training and conduct training in multiple locations simultaneously
- Highlight that the training can be conducted in the absence of Internet and other forms of connectivity

The other avenue for promoting the interface will be at the website of Town Schools. The website acts as the venue for scheduling a demo of the product. Town Schools collects the information and transfers the details to its sales team to take it forward.
6. Action Plans

6.1. Targeting and Positioning Statement

DISHA is a standalone computer application that serves as an efficient, effective, and consistent delivery method for distance learning.

6.2. Sustainable Product Design

Our product was designed with sustainability in mind at every stage of its life cycle.

Programming

Our product is entirely computer based; therefore, this saves trees and eliminates paper waste associated with traditional training manuals and books.
Distribution

The interface can be housed on a USB memory stick made from recyclable materials and will be distributed to Town Schools employees to participate in training. For distribution to external organizations, the interface will be downloadable from the Town Schools website. Both means of distribution significantly cut down on carbon emissions due to shipping and transportation.

Installation

Once downloaded, the product will install automatically, requiring little to no user input. The installation will not require a technician to be present or any special training.

Product Use

The interface is designed for remote use, giving the user a choice as to where he or she would like to do the training, as long as a computer is available. The ability for the user to work remotely cuts down on transportation costs and carbon emissions. The interface also has a built in “Sync Work” option that enables the user to sync the progress he or she has achieved while working remotely with the organization’s main server. This feature enables the organization to keep track of the employee’s progress in training.

Maintenance and Upgrading

The interface can be updated and upgraded automatically if and when updates and upgrades are available. Much like the initial installation, updates and upgrades will require little to no user input and will not require a technician to be present or any special training. If technical support is needed, it will be available on the Internet or by phone.

6.3. Sustainable Value Chain

Increased Business Value

Our product will increase the value of any organization, as it will allow the organization to train its people more effectively and efficiently. If done well, employee training has many benefits. These benefits can include: increased job satisfaction and morale among employees, increased employee motivation, increased efficiencies in processes, increased capacity to adopt new technologies and methods, increased innovation in strategies and products, reduced employee turnover, and enhanced company image.

Increased Competitiveness and Market Share

Our product makes training more accessible to members and organizations, as they are able to access it on the computer instead of having to show up for training at a central location. The ability to partake in training on one’s own time also adds a convenience factor not available with traditional, face-to-face training. The benefits of training that increase the value of the business will also help to increase competitiveness and market share. Increasing the number of members of an organization that have access...
to training amplifies the benefits to the organization; thus the organization is in a better position to compete and increase market share.

**Public Image and Reputation**

Increased employee access to training through our product will increase job satisfaction, morale, and motivation on the job. When employees are more satisfied with their jobs, and are motivated and in good spirits while at work, they are much more likely to produce positive results for, and speak well about, the organization. In aggregate, this has a positive effect on the public image and reputation of an organization. In addition, using our product reduces paper waste, which shows that the organization is environmentally conscious and helps project a positive public image.

**Cost Savings**

By conducting training using our interface in place of traditional, face-to-face training, an organization can save money in the following ways:

**Traveling Expenses:** Travelling expenses due to food, fuel, and time can all be greatly reduced by using DISHA, as an organization does not have to send a trainer from location to location to conduct training in person.

**Labor Cost:** Our product will reduce the need for trainers, as training is conducted on the computer through the interface. This frees up resources that can be invested in other areas of the organization.

**Inventory and Material Costs:** Since DISHA is entirely computer-based, it is much more cost effective to store and replicate the materials used for training; thus it greatly reduces inventory costs.
6.4. Design of the Value Proposition

The Education Consulting Group has made use of the value proposition life cycle model to design its value proposition. The model consists of eight phases: Evaluation Process, Value Co-Creation, Purchase Process, Installation, Use and Operation, Complementary Products/Services, Maintenance and After-Sales, and Ending and Value Transfer. The phases are described in terms of our product below.

**Evaluation**

Potential customers will be able to easily evaluate our product through a demo on the Town Schools website. The demo will show the features, benefits, and capabilities of the interface.

**Value Co-creation**

Customers will be able to participate in the value creation process by populating the interface with their specific training materials. Our product essentially gives the customer a simple, easy-to-use e-learning interface through which they can customize with their content.

**Purchase Process**

The product will be available for purchase and download through the Town Schools website.

**Installation**

Once downloaded, the product will install automatically, requiring little to no user input. The installation will not require a technician to be present or any special training.

**Use and Operation**

The interface will be very easy to use and operate. The interface was designed with low literacy in mind; therefore, the menus are simple, easy to understand, and picture-based whenever possible. The interface is a very elegant and simple solution for the training needs of an organization.

**Complementary Products and Services**

The interface serves as a platform for complementary products and services such as e-mail and videoconferencing.

**Maintenance and After Sales**

The interface can be updated and upgraded automatically if and when updates and upgrades are available. Much like the initial installation, updates and upgrades will require little to no user input and will not
require a technician to be present or any special training. Technical support will be available on the Internet or by phone if needed.

**Ending Value and Transfer**

If customers decide to discontinue use of the interface, they can simply uninstall it from their computer or server and cancel the license. From that point they will not receive updates, upgrades, or any further support.

**6.5. Communication of the Value Proposition**

As our target market is organizations that conduct training, and not the end user of the interface, our value proposition will be communicated via direct marketing. More specifically, flyers and brochures will be sent via snail mail and email to organizations in our target market. The marketing pieces will contain information about features and benefits of the product and direct the recipient to the Town Schools website, where they can find out more information about the product and also purchase it. The website will contain information regarding the product’s features and benefits, as well as a demonstration of its application and capabilities. As more organizations adopt the interface, Town Schools may choose to include success stories of those organizations using the product in their marketing materials.

Word of mouth may also play a part in the marketing of our product. Users or administrators in an organization that uses our product may share their experience with a colleague in another organization and influence them to purchase it. While this scenario is unlikely to happen right away, as more organizations adopt the interface and have a positive experience with it, the possibility increases.

**6.6. Manufacturing Plan, Product Forecast, and Launch Schedule**

DISHA is a software interface and will need a team of technical architects, software developers, and testers to bring it to the form we are proposing. It needs to go through the entire Software Development Life Cycle (SDLC).

Since we are providing the business plan and the design, the technical team will have to take it up from there and go through the following stages:

Technical High Level Design (HLD) – This is the stage where the technical team will work on the technical architecture of DISHA. Also, in this stage, the type of server-client model will be decided on, and the storage devices and how the synchronization will work technically will have to be designed. The main aspect of this stage is to come up with an architecture that can be easily enhanced and extended with new capabilities in the future.

Technical Low Level Design (LLD) – In this stage, the software development team will take over and build the development plan based on the architecture. This is more of a pseudo code level design that is useful for developers. This will also contain the testing plan of the technical modules.
Review, Validation, and Testing – This is the post development stage where the review will be done whether the product has been developed as per the software development standards. The testing will be done to validate whether the requirements have been met or not.

DISHA will be upgraded and enhanced and a new version will be released every 2-3 years. It will also be customized based on whether the product is for the universities, vocational training institutes, or the Small and Medium Businesses (SMBs).

The product is to be launched in the fourth quarter of this financial year. The rollout is discussed in details with the forecasts in the financial forecast below.

### 6.7. Financial (Profits) Impact Forecast

DISHA has a very promising financial forecast, given the huge business opportunity in this sector. We are seeking an investment of about Rs 2,700,000 (about 100,000 USD) to cover the initial costs and sustain the product for regular maintenance for the next few years till the NPV breaks even. We have assumed a market rate of 10 percent for our forecasts.

Initially, for the year 2010, we have assumed that there are not going to maintenance costs, as DISHA will be under development. The following are the initial expenditures for which we are seeking to raise capital:

<table>
<thead>
<tr>
<th>Development cost</th>
<th>150,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distribution cost</td>
<td>25,000</td>
</tr>
<tr>
<td>Utilities cost(10%)</td>
<td>25,000</td>
</tr>
<tr>
<td>IT Support &amp; Maintenance cost(3% increase)</td>
<td>2,500,000</td>
</tr>
<tr>
<td>Enhancement cost(10% in 2 years)</td>
<td>0</td>
</tr>
<tr>
<td>Marketing &amp; Sales cost(10%)</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total Costs</strong></td>
<td><strong>2,700,000</strong></td>
</tr>
</tbody>
</table>

From 2011 onwards, we will start selling DISHA to other private vocational training institutes, and then in the following years we will start selling it to ITIs, SMBs, and universities. The following chart shows how we will progressively sell DISHA to the various target segments.
We will be charging different rates for the different sectors. The rates that we will charge will increase by 5 percent every year to take care of our increasing costs due to inflation and other economic issues.

Given our NPV analysis based on all the above criteria, the project breaks even in 2014, achieving a positive NPV. By 2020, the NPV of investing in this project is a whopping Rs. 93,3085,469 which is a tremendous return for the small investment of Rs 2,700,000.

A financial analysis chart is included in the appendix.

6.8. Ecological (Planet) Impact Forecast

DISHA will have a positive impact on the environment because it will help to reduce carbon emissions related to travel to and from training. Organization members involved in training will be able to participate in training without having to travel at all, as DISHA is a computer-based distance-learning tool. The overall reduction in carbon emissions due to the use of DISHA will depend on the number and size of the organizations using it. As adoption of DISHA increases, the carbon emissions of organizations that have adopted it should decrease.

6.9. Societal (People) Impact Forecast

DISHA has the potential to raise the standard of living for both rural and urban communities through education and training, because it makes education and training more efficient and cost effective for organizations to deliver and more accessible to individuals. Whether the organization is a vocational training institute, university, government industrial training institute, or business, DISHA can help enrich the knowledge and skills of those in the organization. Knowledge and skill enrichment will lead to better
employment opportunities for people and help stabilize and sustain economic growth for the Indian economy.

DISHA can help fill the needs of the government and its initiative to train 500 million people over the next decade. Essentially, the scope of DISHA’s societal impact rests on the rate at which vocational training institutes, universities, and government industrial training institutes adopt it, and on the businesses that impart training. Through its marketing and sales efforts of DISHA, Town Schools has the potential to reach a significant portion of these organizations and directly affect the 500 million people who will be trained in the near future.

7. Implementation, Controls, and Evaluation

7.1. Measures of Performance – Meeting Triple Bottom Lines

People

One key measure of people performance is job satisfaction. Are end users of DISHA more satisfied with their jobs after receiving training through DISHA? Another key measure is end user self-confidence. Are users more confident in their knowledge, skills, and abilities after receiving training through DISHA? Both of these questions are very important in determining the overall social impact of DISHA.

Planet

The key measure of performance related to planet is the reduction in the carbon footprint of an organization using DISHA. DISHA helps reduce the amount of carbon emissions an organization produces because it reduces the need for travel, as it is a distance-learning tool.

Profit

Key measures of financial performance related to profitability will include return on investment, return on assets, return on equity, and profit margin.
7.2. Monitoring and Evaluating Performance on Multiple Dimensions

DISHA will be monitored and evaluated at five different levels: end-user satisfaction, customer satisfaction, financial performance, system performance, and environmental impact. **End-user satisfaction** will be monitored and evaluated at an individual user level. Anyone who uses
DISHA will have the ability to give Town Schools feedback regarding the system at any time via email. In addition, a customer service and technical support system will be in place to assist users with problems and issues that they might face. The customer support representative will be directed to seek feedback about the system while assisting the customer. In addition, voluntary surveys will be sent to end-users on a random basis to gather feedback.

**Customer satisfaction** will be monitored at the organizational level. Essentially this relates to how satisfied the organization is with DISHA. Is it helping the organization to achieve its training goals? Is it making an impact on the productivity and job satisfaction of the organization’s employees? Finally, is it having a positive effect on the profits of the organization? It will be up to the salespeople to keep track of these things through the relationships they develop with organizations using DISHA.

Town Schools will monitor the **financial performance** of DISHA, using data on adoption rates of DISHA by organizations. It will also measure the cost of selling DISHA related to labor, research and development costs, and marketing and sales costs.

**System performance** refers to how well the software performs. DISHA will have an automatic error-and-issue reporting system built in that will send information to Town Schools when DISHA crashes while operating on a customer’s computer. This will be similar to issue-and-error reporting built in to Microsoft Office. In addition, DISHA and subsequent enhancements and updates will be thoroughly tested within Town Schools before being released to customer organizations for use. Error-and-issue data will also be collected and assessed by the customer service and technical support team at Town Schools.

Finally, Town Schools will measure the **environmental impact** of DISHA. Town Schools will collect data about the amount of miles its employees and customers’ employees have to travel vs. the amount that they would have traveled without DISHA. Using this data, Town Schools can determine how much money is being saved in fuel and transportation costs and also how much DISHA is reducing the carbon footprint of an organization.
APPENDIX

A. SWOT Group

B. Financial Forecast (is in separate attachment)
A. SWOT GROUP

Town Schools Education Consulting Group SWOT Analysis

<table>
<thead>
<tr>
<th>INTERNAL STRENGTHS</th>
<th>INTERNAL WEAKNESSES</th>
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| • Team with diversified skills and experience  
  • Expertise of working in developing economies like Kenya and India, and expertise from the US education system as well  
  • Prototype ready for implementation  
  • Unique teacher training interface (most are focused on training students) | • Lack of financial backing  
  • Only one potential client lined up (customer is Town Schools)  
  • No presence in the target markets like India and other developing nations  
  • Customers and consumers are different |

<table>
<thead>
<tr>
<th>External Opportunities</th>
<th>External Threats</th>
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</table>
| • Great opportunity for exposure (internationally)  
  • Potential career opportunities/ professional advancement  
  • Unique tool and interface developed  
  • Multilingual capabilities  
  • Same model can be replicated for many educational purposes  
  • Can extend business to university teaching tools as well | • Presence of big players in the field of e-learning  
  • Huge investment by Indian government likely to draw the attention of Indian IT biggies to enter this sector through their CSR programs |
## B. FINANCIAL FORECAST

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### Rates

- **Vocational**: 125000, 131250, 137812.5, 144703.1, 151938.28, 159535.2, 167512, 175887.6, 184681.9, 193915
- **Univs**: 250000, 262500, 275625, 289406.3, 303876.56, 319070.4, 335023.9, 351775.3, 369363.9, 387332.1
- **SMBs**: 350000, 367500, 385875, 403188.8, 425427.19, 446998.5, 469033.5, 492483.1, 517109.4, 542984.9
- **ITi**: 100000, 105000, 110250, 115762.5, 121550.63, 127628.2, 134009.6, 140710, 147745.5, 155132.8