# **BUSINESS PLAN**

## **Online business description**

* Digital Board Marker uses online Learning Management System platform to provide the lectures may be recorded by their class instructor. It uses internet bandwidth efficiently as compared to other online video streaming lecture websites.
* Digital Board Marker uses digital technologies for efficiently storing, streaming and uploading lecture animations.
* Digital Board Marker will have and LMS module that will contain the profiles of students and teachers. Both profile types will generate data that will generate the learning curve of students and skill curve for teachers.
* **Vision**

Implement Digital Board Marker in all major institutes in Pakistan and raise need of technology in education. Make education system modern and efficient.

* **Mission**

Implement Digital Board Marker in the CSE department of campus. Provide a convenient and efficient lecture recording system in terms of storage and internet bandwidth. Maintain the student and teacher’s online profile and also linked features. Analyse the cost factor of storage media and processing machines.

* **Objectives**

**Industrial Objectives**

* To provide a reliable and efficient system to industry to reduce their storage issues.
* To provide a system to access all the industrial presentations on a single platform.
* To provide a smart system to access all presentation at any time even with minimum storage available and with minimum internet bandwidth utilization.
* To provide ease of accessing meeting discussion at any time with minimum available resources.

**RESEARCH OBJECTIVES**

* To flourish the research in the field of machine learning an computer vision.
* To research in the field of handwriting recognition for automatic google searching of difficult or important words.
* To research in the field of machine learning and handwriting recognition for automatic notes generation for ease of students and teacher.

**ACADEMIC OBJECTIVES**

* To provide the educational institutes with a solution of class lectures availability are any time with much less internet data and storage utilization.
* To provide a platform with much ease of accessing class lectures of all courses.
* To provide a most reliable solution of the problem that student face while listening and jotting down the lecture at the same time.
* To provide students with high resolution video lectures without compression.
* To provide teachers the ease of accessing all the students submitted assignments from a single platform i.e. LMS.
* To provide system with a smart solution of providing all course related content for the students.

## **Rationale**

* Digital Board Marker have two major modules in terms of cost and revenue. Board marker hardware cost Rs 8,500. Desktop Pc cost Rs 2,000. Central Server cost Rs 5,000.
* LMS is a software entity and will have a market rate price of Rs 20,000.
* Revenue model of the project is:
  + 17% of cost of Digital Board Marker Hardware that is Rs 1500 that is 150, 000 per 100 hardware modules sold
  + LMS, Controller App, Offline Player adverts that is Rs 100, 000 per month
  + Rs 20, 000 revenue on each LMS software sold
* Digital Board Marker has all education institutes, Industrial presentations, Online tutors and Sketch artists as target audience. The project will meet its goals and fulfil its objectives by implementing and maintaining the system to target audience.

## **Management**

* A particular education institution, online tutor or a sketch artist will own the Digital Board Marker and hence responsible for online business. Team of programmers, technical maintainers and system admin will have been managing the system.
* Semester wise assessment will have enough impact on the management target and progress for the successful deployment and maintenance. Result and announcement meetings may be called for high profile as well as low profile instructors, so the system has the impact on instructor’s performance as well.
* Although there are some risks involved in the deployment, implantation and maintenance of the system such as:
  + There may be a problem of less student attendance and less student teacher interaction. Students may become lazy and their handwriting speed may affect.

## **Marketing strategy**

* Social Media paid adverts will help in gathering customers quickly.
* Digital Board Marker will be placed as a product on many online shopping platforms such as daraz.pk.
* The product will be displayed in featured products for a month atleast for early customer gathering.
* Seminars and presentations will be held in education institutes.

## **Resourcing**

### People

* Team of programmers will be needed to develop and maintain the system software.
* Team of Administrative staff will be hired to create and maintain the lecture policies such as lecture length, data usage, hardware allowance.
* Marketing expertise will be needed to spread the idea and product towards the customers.

### Equipment/Infrastructure

* Stable internet connection with low ping will be needed.
* Host device such as Desktop, Laptop or Smartphone will be needed to play the lectures.

### Funding

This section could include:

* Approximately 50,000 rupees are required for early establishment and deployment of the system.
* Funding platforms for small businesses such as KICS.

### Outsourcing

* Expert of hardware technology may need to be outsourced undergraduate/graduated from a reputed institute from the respective discipline.

## **Benefits of the online business**

* Remote business is always a growing business.
* Realising the power of internet, the business idea or product can be spread worldwide.
* Lectures can be viewed online anytime, anywhere and of any education institution.

### Revenue streams

* Revenue model of the project is:
* 17% of cost of Digital Board Marker Hardware that is Rs 1500 that is 150, 000 per 100 hardware modules sold
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### Efficiency gains

* Urban areas in which congestion of education institutes is high and facility of internet is available to the natives. Whether it be sending out pay stubs to employees or sending receipts to vendors, we will automate whatever we can. By reducing the component price by purchasing it in bulk at whole sale rate.
* Making the system self-maintainable and hiring less number of employees.

## **Challenges and constraints**

### Technical

* High internet ping may result into lag while streaming online.
* Marker hardware may not work in direct sunlight.
* There may be increased distance between instructor’s mic and the audio receiver resulting into poor quality audio due to loss of data.

### Legal

* Some reputed organizations would like to make their content private and hence not letting outsider to access the lectures.

### Organisational changes

* There may be faster and cheaper storage media available and after that users may not care about the storage efficiency.

### Resources and timeframes

This section could include:

* collating, editing and clearing the content in time to meet milestones
* the complexities and time involved in altering office workflow and processes to incorporate maintenance of the site
* special events or outside forces that may challenge the milestones.

For example, key staff on leave.

### Competitors and collaborators

* Smart Board is a touchpad that is fixed on whiteboard. It results in an interactable projector.

## **Project evaluation**

* Progress of the project will be evaluated by assessing it in terms of goal that is:
  + Making storage efficient system that saves up to 100 times more storage.
  + Provide online platform to students and instructors to share their class lectures online.
* 10% gain in grades in each classroom in which Digital Board Marker is implemented.
* Easy to operate and easy to maintain system that any instructor or even a layman can operate it easily.
* Grade report from student data placed on native LMS platform of each education institution will be assessed by generating learning curve of students of each class and comparing it when system was not implemented.