Process Digitization of Training Management and Information System

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Abstract:- The training management at UP Police was carried out in a conventional paper-based fashion. This method was very obsolete, it consumed high manpower and other office resources and then also it was neither time efficient nor cost effective. A systematic survey was conducted on the impacted people to research a perfect solution for altering the methodology of training management while keeping the methods intact. The prime requirement of this study was to research and propose the best practices to be followed to cater to the needs as required for any institution to become technology ready by adopting the best available technology feasible for that institution.

After an exhaustive study done over the inputs from facts and interview the result proposed is to implement the following solutions at the organization:
- Training Management and Information System
- Cashless Transaction System
- Paperless Communication System

I. INTRODUCTION

A. Case Study

The people at Uttar Pradesh Police Training Colleges were using conventional methods to cater to their needs about the day-to-day working for their training requirements.

The prime requirement of this study was to research and propose the best practices to be followed to serve the needs, as required for the institution to become technology ready by adopting the best available technology feasible for the institution.

The research was initiated to study the current situation of the organization in accordance with the benchmark for similar platforms. It was also required to analyze and propose a To-Be model and strategy to achieve, while highlighting the Gap in the two states.

We studied the best practices to achieve the benchmark while highlighting the approach, directives, strategies etc. We also explored and mentioned the final implementations that are necessary in the establishment of better to-be system.

The prime focus of the research was to establish a fully competent training management and information system, which should be consisting of various modules governing the administration, education, housing, and other departments under consideration of UP Police Training Administration. The development plan, implementation strategy and the roll out plan were the key highlight for this research.

B. Current Working Analysis

The UP Police Training Academy/Colleges/Schools works under the direct guidance of the administration of the institute, under the guidelines set by the Training Directorate of Police Training, Lucknow.
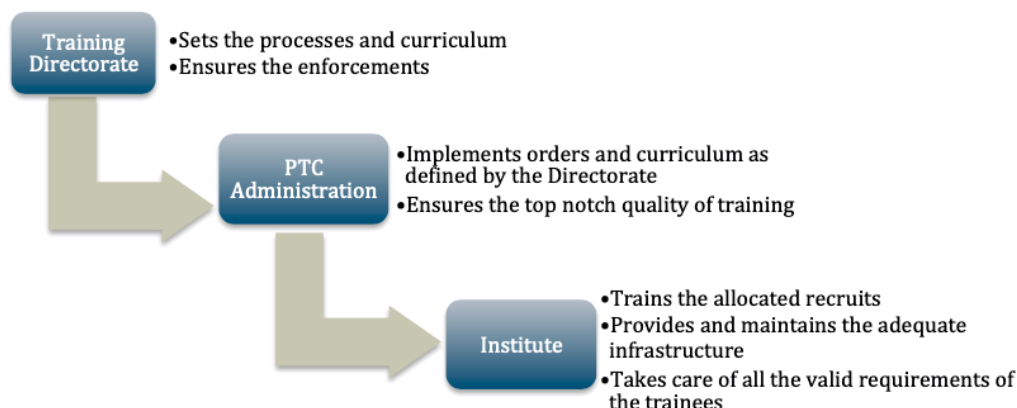

Fig. 1: Current Working Analysis

The institute mainly relied over pen-paper method and uses the computers only for document typing. The current process involves intensive use of human intervention at every stage of document traversal.

The status and location of the particular document is dependent on the employees and cannot be viewed or controlled centrally.

II. COLLECTED DATA

A. Current status
- Original documents and document lists were not managed as a defined file type.
- No regulation was present to manage digital data.
- All documents were stored for 10 years and were discarded afterward.
- Information related to personnel changes was notified over telephones.
- Nearly no use of e-mail within internal divisions, whereas little be used (approximately 20~25%) in cooperation between other government organizations.
- Unsystematic document archive was another issue and due to the pile of hand-written documents, the task of data finding took considerable time and efforts.

B. Issues of current Workflow
- Due to the low quality of paper, some constraints of environmental factors (e.g., humidity, temperature etc.), the status of documents storage was vulnerable.
- Paper documents were easy to be destroyed and be damaged; in addition, it took longer to find records and archives when information was required.
- With this, numerous cases (esp. personnel records) might take much longer time to find related information, because of not up to date information in real-time.
- Through this status, informatization such as Payroll sheets, Personnel records and Official documents management was practically needed; but it had not been acted due to lack of methods and budget for reforms.
- All official documents were written by hand and managed through list of documents and handed them in person (through offline mode only).

III. FINDINGS

The current practices at the institute were found to be anomalous, and while enabling the TMIS these issues could be addressed to achieve a perfect and ideal working atmosphere.

These deficits could be defined as under:

A. Chances of human error
- The preparation of reports could go wrong.
- The processing of a file could be delayed, or it could be lost.

B. Manpower
- High Manpower requirement for a small task
- Lack of mobility in the system made the available manpower to be always engaged.

C. Time Consuming
- A single task also required the high amount of preparatory and obligatory task which consumed time.
- The unavailability of the officer often delayed the work unnecessarily.

D. System was non-transparent
- What, when and how was always at the discretion of any one which proved as a hindrance in transparency of the system
- If something ambiguous had occurred, the fault finding was slow and sometimes impossible.

E. Resource Hungry
- The system required paper and other consumables which could have been reduced using technology.
- In case of any error, the used paper and other consumables were wasted.

F. System was not paperless
- It was making the system carbon negative.
- The paper-based working involved the risk of manipulation.
- Paper was prone to get torn, lost or mutilated.

G. Unmanaged paper trail
- Searching for information through a pile of paper was a dreary task.
- A person specialised was to be employed to carry out the task of managing it.

H. Lack of proper management system
- The current system was being managed entirely on paper and every entry was to be replicated at multiple places.
- This made the system slow and cumbersome.
- The paper-based management system was tough to be audited and was prone to human errors.

I. Lack of centralised data
- The whole system was distributed into departments and hence the data was also scattered.
- The data availability was dependent on the employees.
- Absence of a particular employee hindered the data traversal.

J. Searching a document was a very hectic process.
- The document/files stored by in the past were very hectic to be recovered.
- The document/files were prone to get destroyed in the course of time.

IV. SWOT ANALYSIS

STRENGTH:
- Well-adapted current system of working.
- Adequate Man Power
- Works are divided into team.
- Good technology adaptive environment.
- System is easy to understand by the staff.
- Easy workflow.

WEAKNESS:
- Slow process flow
- Excessive use of paper
- Quality of reports is not always accurate
- Costly
- Time consuming
- Non-Transparent
- Insecure
- No use of available Technology

SWOT

OPPORTUNITIES:
- Time reduction
- Minimal use of paper
- Quality of reports would always be accurate
- Transparency in the system
- Secure and Centralized data
- Quality and cleanness of data
- Data retrieval for external bodies could become autonomous, hence making the system fast & effortless.
- More productive time could be utilized in some meaningful work.
- Better management would result in dicipline enforcement.

THREATS:
- Security issue
- Advanced Unauthorized person can access data.
- Transition process to the new system would be a little time consuming
- Educating staff, otherwise paper dependent staff would be a tough task
- Maintaining the sanity of data through regular filtration would be a great task as the input is in Hindi and the standard format for entering the data would take some time to get developed.

Fig. 2: SWOT ANALYSIS

V. IMPLICATIONS

A. Gap Analysis

A Gap analysis is used to compare where you are against where you would like to be. The major gap in the current and the proposed system could be summarized with a fish bone analysis defined as follows:
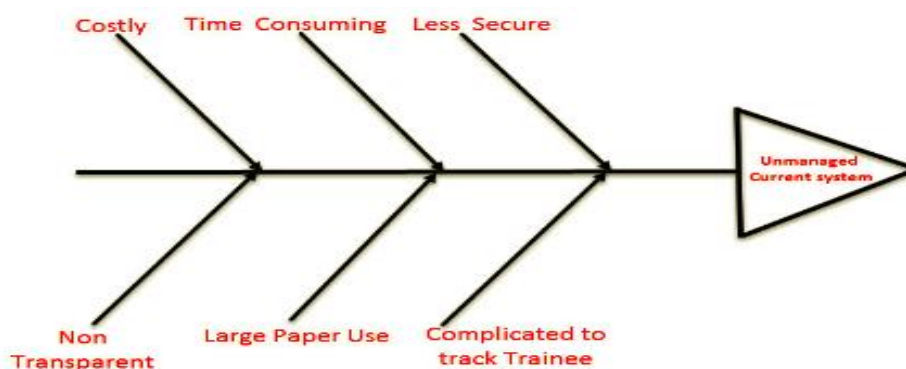
Costly   Time Consuming   Less Secure

Unmanaged Current system

Non Transparent   Large Paper Use   Complicated to track Trainee

Fig. 3: Gap Analysis

B. Approach And Directions

The approach began by building the right mind-set for enabling the participants to accept changes while polishing their skill sets for using the perfect toolset provided in the form of TMIS. It was a unique approach for capability building involving active participation of each participant.
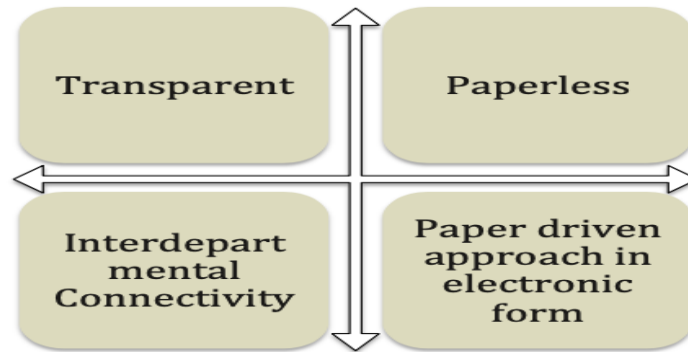
➢ *Management qualities*

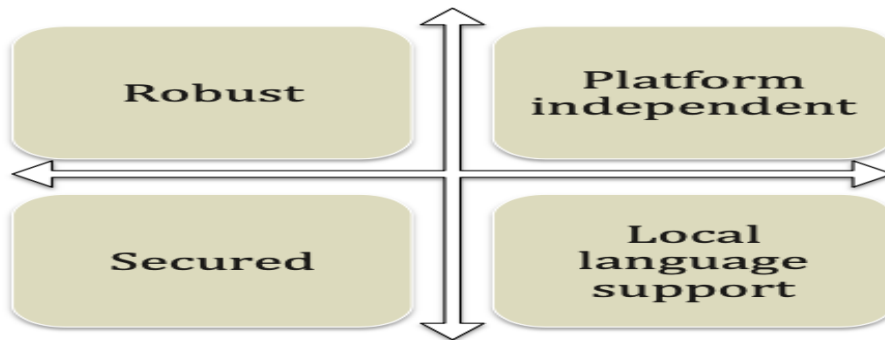Fig. 4: Management qualities

➢ *Technical qualities*

Fig. 5: Technical qualities

C. Summary And Implications

TMIS aims to bring in more transparency, efficiency and accountability in training process leading to increased productivity. One of the key areas of importance in TMIS is to bring in the required transition to electronic mode of working on files & documents, details & schedules etc. Moving from a manual document, file and paper-based functioning to an "electronic" environment requires effective management to implement the transition. This involves digitizing and storing existing physical files and records and in managing the newly created electronic files and records.

The considerations in the digitization processes are:
- Digitization of the existing documents and files.
- Storage of files and records after the digitization.
- Roles and responsibilities of each of the officers involved in the transition process.

The major stakeholders in TMIS application are the employees involved in training, represented by government employees. Their leadership skills, technological awareness, commitment, and willingness are central to the success of any project. The adequate skills and knowledge required are often seen missing among the employees. This skill-gap as

An effective TMIS implementation was proposed to have management and technical qualities, to get maximum people onboard in a minimum time possible. A 4-Box diagram would be an easy tool to explain both the aforesaid qualities:

well as mindset-gap that resists to change and information sharing could be detrimental to the successful implementation of the project. It is essential to infuse the above attributes and prerequisites for good transition into every stakeholder involved or going to get involved.

Recognizing the need for developing capabilities and skills in training management and information system, the key feature of the programme is that it is based on Case Studies combined with interactive sessions with discussions on practical problem solving, focused hands-on and skill building in training infrastructure.

VI. PROPOSED MODELS

The original objective of TMIS services is to enhance the effectiveness of administration tasks and convenience of training environments. Therefore, when TMIS initiatives are promoted, it is adequate to consider service providing, administrative informatization and working process automation, lastly infrastructure implementation altogether. However, for providing e-services to trainees, administrative informatization, automation of working process and infrastructure implementation should be enacted before anything.

The status of current IT infrastructure, working process and the members' informatization properties related to TMIS, the effectiveness of working process through automated task process should be reminded and enhancing access to information by securing IT infrastructure and equipment ought to be preceded.

For the same purpose, the proposed e-governance model could be depicted in the following image, with a highlight of the technological advancements:
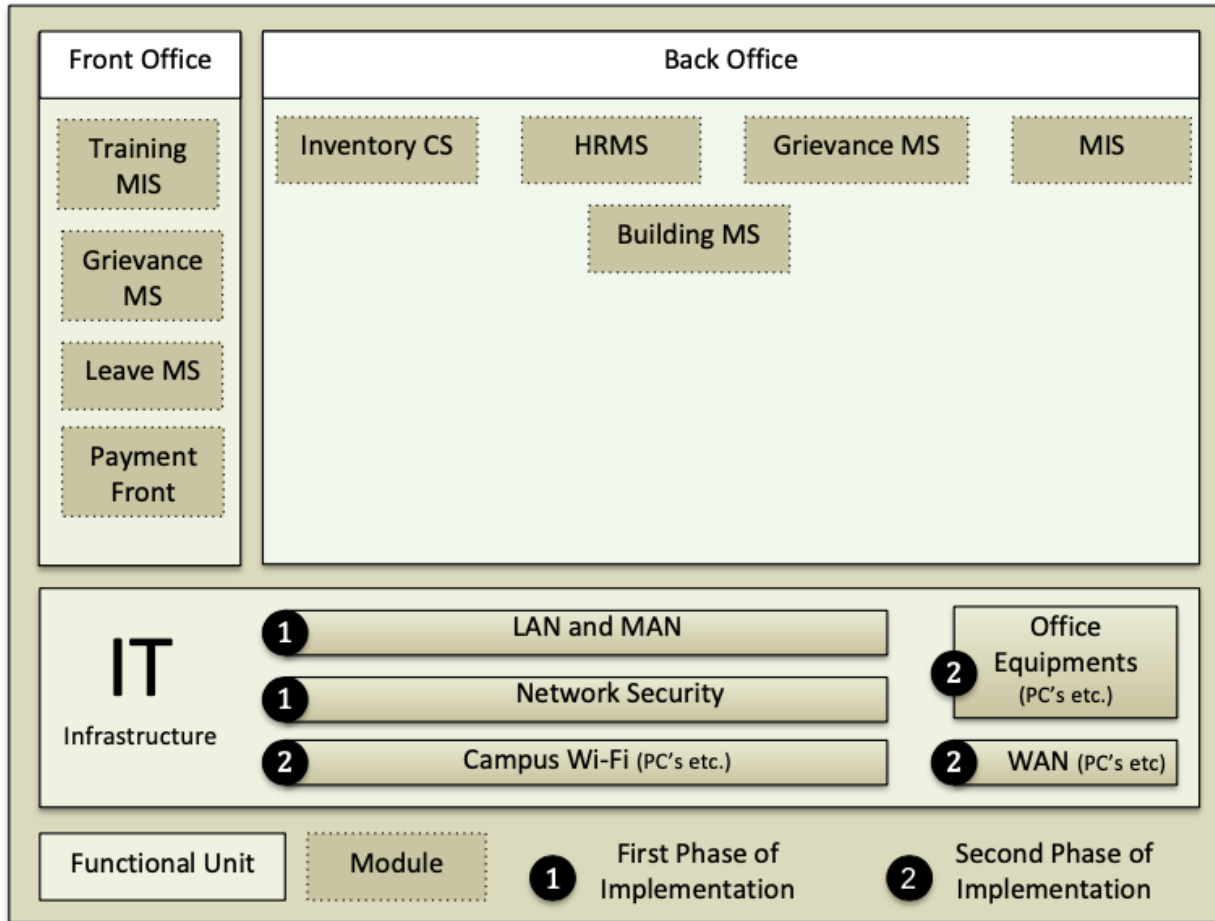

Fig. 6: e-governance model

VII. ESTABLISHMENT OF TMIS ENVIRONMENT

TMIS enables us to drive effective training management work and managing these tasks of day to day with ease of use and collate these data for easy reporting and analysis with the click of a button.

A. Centralize your training data

Access, maintain and manage all administrative data to and from one location. TMIS database would enable us to do this all in real-time over a secure web-based platform.

B. Streamline Training Branch, Q - Branch, Accounts Department, Adjutant Branch, and all other office tasks

TMIS would enable us to set up an unlimited number of user groups based on titles, roles, departments, facilities, or locations and easily manage all office work like postal management, inventory management, account management, general dairy management.

C. Effective data monitoring and analysis

TMIS would make it easy to track progress and monitor every task of office that can provide data to analyze, which factors will help to grow system and which factors are hampering growth.

➢ *Key Elements of TMIS*
- No time wastage
- Easy to understand
- Quality of data
- Fast Process
- Reducedmanpower
- Access progress reports

➢ *TMIS – Benefits*
- Enhanced transparency
- Increased accountability
- Assured data security and data integrity
- Transform the orthodoxial work culture and ethics
- Promote innovation by optimizing staff's effort and time from unproductive procedures

VIII. DESIGN BRIEF

A. About the model

The TMIS would aim to conduct all the training and administrative procedures electronically thereby transforming the working method, to be purely paperless and bringing about the benefits of digital communication. It is a 'Digital Workplace Solution' that comprises of various modules under various sections.

The Training Management and Information System would be hosted on premise and access to the application will be made available over private network. Network connectivity is essential for users to access system. Hence either dedicated leased line or a sound Internet connectivity would be needed at all offices where TMIS is to be implemented.

The system proposed at Police Training College, would mainly comprise of two different macroscopic units:

Fig. 7: The system proposed at Police Training College

Elaborating further the three sections of the system would embody the different systems and modules as per the need defined accessed while analyzing the requirements and needs of the staff at the institute.

The different modules as needed under different units of the e- governance system could be defined as follows:

➤ *Administrative Unit*

The administrative unit of e-governance for the Police Training College would comprise of mainly the tasks that are undertaken for the effective control over the administration of the premises and to keep a surveillance watch over the activities at all levels.

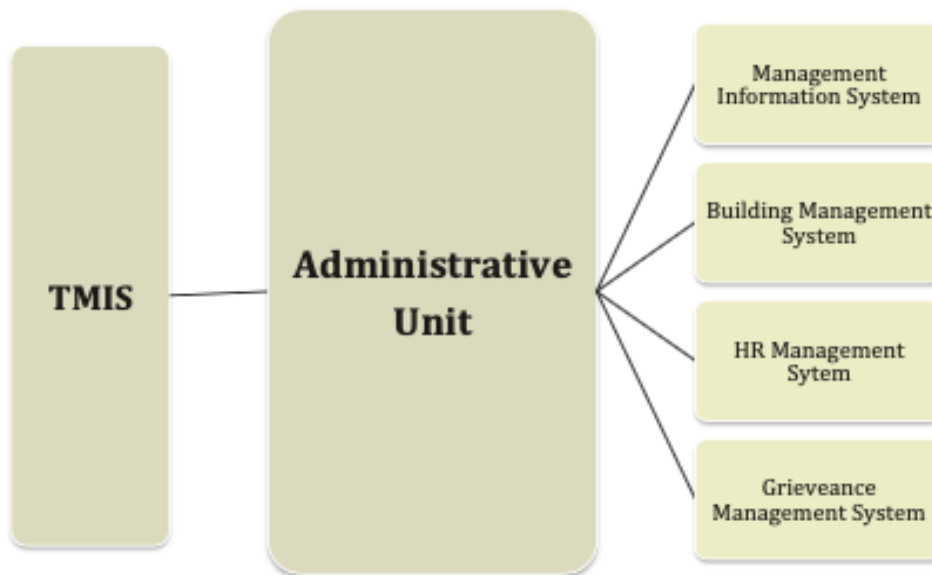The major modules could be defined as follows:

Fig. 8: Administrative Unit

➤ *Training Unit*

The training unit of e-governance for the Police Training College would comprise of mainly the tasks that are undertaken for the effective control over the training of

the trainees allotted to this institute and to maintain the decorum of the courses and the activities allotted.

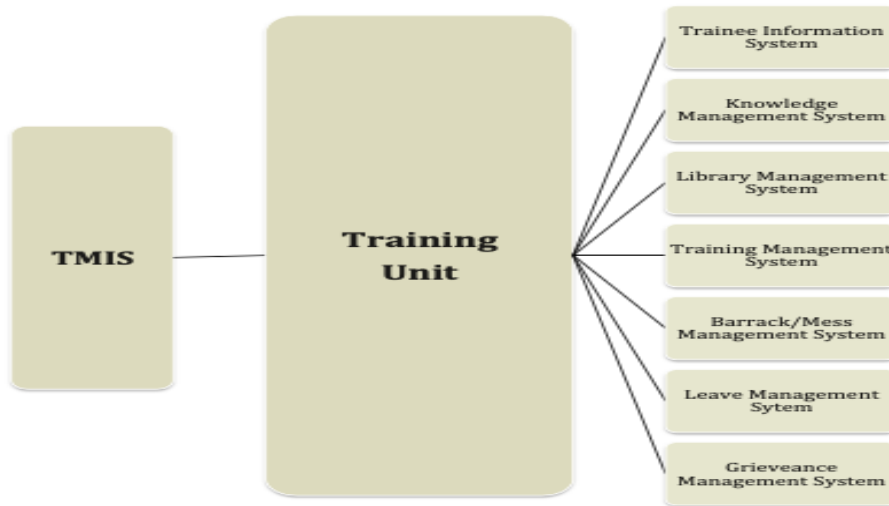The major modules could be defined as follows:

Fig. 9: Training Unit

B. Constraints

➢   *Risk Factors*
   There are seven main areas where we warned against anything to go wrong in a data Centre facility: power, water, climate, structure, fire, communication, and security. These were incorporated in a disaster risk assessment.

Power	Disasters will likely cause a power outage. No power means no Data Centre. Multiple power source availability means that a data Centre will stay online through the worst.
Water	• Data Centers are allergic to water. Even the smallest amount can cause a lot of damage. • Water penetration protect can help to prevent the destruction of mission-critical infrastructure. • Conversely, losing a water supply for any cooling or fire suppression systems requires multiple secure water sources.
Climate	A Data Centre requires a precise climate. Not too hot, not too cold, and without too much humidity in the air. A high-quality and adaptable climate control system adds to reliability.
Structure	The Data Centre's building of operations itself. If poorly constructed, risk and exposure to the elements will be increased.
Fire	Fire damages pretty much everything it comes into contact with. Keeping it away from a Data Centre is a top priority. All data Centre facilitates your host in should come with a fire suppression system.
Communication	A backup communication link is always recommended.
Security	Security procedures should exist for during a disaster to avoid unauthorized access to any part of the facility.

Table 1: Risk Factors

> *Resistance Factors*
- Resistance against the Informatization:
✓ The employees might take a stand against the automated work processing since they tend to stick to their old customs.
✓ No-paperwork might result in maladjustment to the new system thus leading to confusion and degrading the system effectiveness.

- Tangle with the assigned roles:
✓ Organizational environment would have to incorporate changes for efficient work processing.
✓ New tasks would get created in return for the decrease of the existing manual works.

> *Undertakings*
- Perform both existing and new work processes simultaneously for a certain period.
✓ Encouraging the users on condition that the user interface will be enhanced when the pre-training and system would be completed thus minimizing inconvenience of the users.
✓ The system change including no-more documents would be first applied to loyal entities in the way of no-attachment and gradually expanding the applicable scope.
✓ A Manual Work Processing Directive, tentatively called, would be set up and always ready for possible system errors.
- Change over the recognition on Know-how open and award incentive
✓ Awaken people to a sense of cooperation: individual know-how makes an organizational know-how.
✓ Considering the possibility that the statistics works were utilized for deciding for works in the field by giving an incentive to know-how provider.
- Coordinate concerns between departments via the Coordination Committee
✓ Assigning roles according to the characteristics of the new system, in a fair and reasonable manner.
✓ Setting up a coordinating committee and committing it to discuss and decide main policies early in the computerization and have officers work in the informatization driving force thus scheming understanding between entities.

IX. CONCLUSION

The Uttar Pradesh Police Training College at Sitapur was currently using conventional methods to cater to its needs regarding the day-to-day working for their training requirements. The prime benefit of this initiative would be to cater to the needs as required for the institution to become technology ready by adopting the best available technology feasible for the institution.

The focus of the initiative would be to establish a fully competent training management and information system, which should consist of various modules governing the administration, education, housing, and other departments under consideration of the police training college.

The final goal of this initiative was:
- Training Management and Information System
- Fully functional Mobile Application
- Cashless Transaction System
- Paperless Communication System.

The primary benefit of this initiative would be:
- Enhanced transparency
- Increased accountability
- Assure data security and data integrity

REFERENCES

[1.] Police Training Manual
[2.] Various Resources at the library of Police Training College, Sitapur
[3.] CCTNS Handbook on do`s and don`ts hand holding personnel