Suraksha
Digital Transformation to Indian Police Services

ABSTRACT
With the vision of Digital India programme to transform India into a digitally empowered society with safety of every individual is of highest priority. This is a showcase program by Government of India to improve online infrastructure. To increase limpidity of Indian Police Services and to boost the public confidence rating, a mobile app as an all-in-one solution to enable secure real-time operational system will be developed as a part of the proposal. It enables every individual to get connected with the police system anytime, anywhere in India with various modules which includes Criminal booking module, Case management module, Forensic module, Investigation module and Traffic monitoring module with accident rescue operations. All these modules will be used to disentangle various botherations that every individual undergoes. Thus refuge and redemption can be provided to every citizen of the country.

1. INTRODUCTION
India is now progressively seen as a destination for innovation and digital transformation solely due to some of its recently launched initiatives such as 'Digital India'.

Digital India is a drive launched by Government of India to ensure that, the services are made available to citizens electronically and it also aims to assure that individuals get benefit of latest information and communication technology. This campaign is a big step forward towards digital transformation. Digitalization is a buzzword today and forever in future making huge impact on the way people live in the society. Digital India has several plans; one among them is E-governance. Through E-governance, services will be made available to citizens in a contingent, efficient and limpid manner. All the services are made available from a single point of contact, this guarantees equal reachability to all individuals. As a result the rate of response is increased since digitalization redefines the services provided by the nation. The basic mission of the whole campaign is to reorganize the superannuated methods of rendering services from the government.

Keeping this concept as a foundation an attempt will be made to digitalize the Indian Police Services through an all-in-one app SURAKSHA. In order to make a country free from any kind of negative events, safety of every individual has to be made possible. As soon as any citizen comes up with the word safety, it is the Indian Police officers that will come to mind, as they protect the nation in all the possible ways. With the help of digitalization a drastic change can be brought in the country where, any kind of operation can be made automatic. This kind of automation helps every individual to protect himself whenever he/she is in predicament. By giving refuge the highest priority, a mobile application SURAKSHA will be developed which can be used throughout the country by any individual. It requires some basic details of the user at the very first login. His/her login details can be used to verify any kind of information related to a particular person whenever needed. The user can use his/her AADHAR number as the login ID. Whenever the user signs up, he/she will be given with a list of options, that specifies the type of incident that has occurred and he/she will be automatically connected to the nearest police station using the Google Map API's, using which a tracking ID will be generated for each request from the user side. The police officers can track the event spot and take further actions. Thus an attempt is made to provide safety and security to each individual at their finger tips using the proposed app SURAKSHA.

2. RELATED STUDY AND NEED FOR DIGITAL TRANSFORMATION IN INDIAN POLICE SERVICES
The Indian police service has been serving the country in many ways since ages. The duty of the police force is to provide citizens with a sense of safety and security, to maintain peace and order in society as well as anticipate and disclose crime. They are there as the law enforcers - to make sure that everyone, including the police force itself, abides by the law at every step. They are the only expedient on which the citizens of the country can reckon upon in case of any negative events. The efficiency of the Indian Police Services sometimes dawdles due to some shortcomings. Even though the police officers work effectively and efficiently there are some crimes that are out of their reach. The approach adapted to suffice the mankind seems to be a very monotonous process. There are 12,809 police stations in the country. Although 16.6 lakh police personnel is the sanctioned strength there are in fact only 14.2 lakh in service. The proposed app makes an attempt to solve any problem automatically due to digitalization. It helps to solve the problem of

- Overlapping between the responsibilities held by many police officers.
- Legacy problem.
- Corruption in the society.

User interaction becomes more feasible due to automatic response from the police department end. Many sectors have already been digitalized such as

- Applying passport online
- Filing income tax
- Railway system
- Digital technology enabled farming
- Broadband highways
- e-Kranti - Electronic delivery of services
- Digital locker
- e-Hospitals

With the same idea to digitally transform the country with respect to Indian Police Services a module application SURAKSHA will be developed that can be used by each and

every individual throughout the country. The user will be enabled with a login to the mobile app using AADHAR number as login ID. On every user registration or login to the app, the details of the user will be recorded in the centralized police system database. User profiles including basic information and a photo has to be uploaded at the very first login. The user will be mapped to the nearest police station automatically from his/her current location through Google map API's. There will be an explicit option to change the user to police station mapping if required. However the user will get a faster response if he/she gets connected to the police station which is in the area where the user is present. The user will be given with list of options to lodge complaints against, lost mobile phone/sim card, physical assault, exploitation, robbery, fire accidents and also traffic related issues. The moment user requests for any of the services, a tracking ID will be generated to get in touch with the status or response from the police department end. As an instance, a person can lodge a complaint for lost mobile phone with all the details to get the ACK in PDF which can be used to get a duplicate sim card. Also, Police patrolling vehicles can be mapped to any of the complaints based on the severity and user can check for the actions taken by police immediately. Thus, every user will be enabled to keep in touch directly with the police system to use the various police services at finger tips.

3. ARCHITECTURE

The overall digitalization process works on a particular architecture which describes the essence of the proposal. This architecture mainly emphasizes on how an inhabitant can seek government services through a mobile app.

Given below is the design

[Arch image]

The above figure describes how an individual can seek assistance from the IPS and how the assistance is provided i.e. the backend work involved which is transparent to the user.

The whole architecture can be divided into 3 modules:

- Module 1: describes the user end.
- Module 2: describes the police end [internal working].
- Module 3: describes how the action is taken.

Request service through multiple channels   **Police control room**
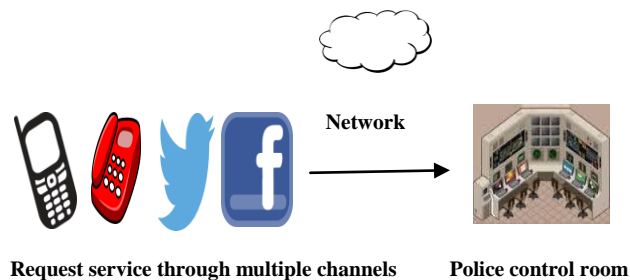
The first module describes briefly about how requests from individuals reach the police station.

Adhaar number is used as a key for soliciting.

The protocol to be used will be TCP/IP suite which is said to be the most effective protocol. As a result the requests are less likely to be dropped. Requests reach the police server through an interface called the Common Gateway Interface.
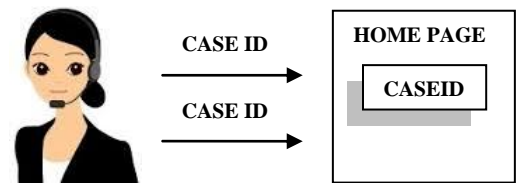
The requests that had been lodged at the police control room can be interpreted as cases. For each case, a Case Id will be generated by operators assigned for the purpose.

These Ids will be reverted to the user on their home page.

Use of Case Id:

- It enables the solicitor to manually track the development.
- These Ids have time span when expired, the case is forwarded to higher officials.

Requests   **Patrolling cars**   **Crime spot**

This module is the core of the architecture as it deals with the actual work.

A study on latest development in IPS tells that new patrolling vehicles have been promoted. The third module deals with this new improvement.

After all the basic processing of the request is done, each of those will be handed over to the patrolling vehicles which are near to the crime location. Also, each case will have a severity block which has to be filled by the user. Thus, the case is further negotiated.

Until an undertaken case is fully monitored, the teams will not indulge themselves in any other case.

The police vehicles are said to handle 6 locations individually which are 278 in count. In a worst case scenario, through this technology, 1778 cases can be handled in a day.

4. POSSIBLE OUTCOME

5. CONCLUSION

Emphasizing on details again, SURAKSHA is designed on android platform to make Indian society digitally empowered with the subvention of recent improvements in mobile technology. This application helps tracking the location of the victims through Google Map API's, which helps the law enforcement authorities to salvage the person in need as expeditiously as possible. As stated above, bringing digitalization to Indian Police in the society is very much interactive. Digitalization enables very efficient and faster means of communication between the citizens and the police system. India is the second largest country to use smart phones

and hence it proves that this application can be very helpful for personal safety. As the proposal name SURAKSHA which means safety, to provide security to every individual is the focus. Digitalization in every field is inevitable today; hence enabling safety of every individual of the country at their finger tips is the main aim of this proposal.