

# **Case Study**

**Hawk Eye- an initiative by Hyderabad City Police Department to deliver public services via mobile platform**

**URL- <http://hyderabadpolice.gov.in/HawkEye.html>**

## INDEX

	<b>Contents</b>	<b>Pg.No.</b>
1.	<b>Executive Summary</b>	<b>3</b>
2.	<b>Introduction</b>	<b>4</b>
3.	<b>Overview of the Champion</b>	<b>4</b>
4.	<b>Project overview/history of project</b>	<b>4-5</b>
5.	<b>Situation in Champion's State/District</b>	<b>5-6</b>
5.1.	<b>Beneficiaries</b>	
5.2.	<b>Problems Identified</b>	
5.3.	<b>Strategy Adopted</b>	
5.3.1.	Details of Baseline Study	
5.3.2.	Roll out/implementation model	
5.3.3.	Communication and dissemination strategy and approach used	
6.	<b>Modalities of the New System (Solution)</b>	<b>6-10</b>
6.1.	<b>Technology Platform Used</b>	
6.1.1.	Description	
6.1.2.	Interoperability	
6.1.3.	Security Concerns	
6.1.4.	Service Level Agreements (SLAs)	
6.2.	<b>Citizen Centricity</b>	
6.2.1.	Impact on effort, time and cost incurred by user	
6.2.2.	Grievance Mechanism	
6.2.3.	Audit Trails	
6.2.4.	Interactive platform for service delivery	
6.3.	Demonstrate Innovation in use of Mobile Technology for e-governance	
6.4.	<b>Adaptability Analysis</b>	
6.5.	<b>New Model for service delivery</b>	
6.6.	<b>User Convenience</b>	
6.6.1.	Service delivery channels	
6.6.2.	Completeness of information provided to the users	
6.6.3.	Accessibility	
6.6.4.	Facility for online/offline download and online submission of forms	
6.6.5.	Status Tracking	
6.7.	<b>Efficiency Enhancement</b>	
7.	<b>Impact on the Stakeholders/Beneficiaries</b>	<b>10-11</b>
7.1.	<b>To organisation/Government</b>	
7.2.	<b>To citizens</b>	
7.3.	<b>Other stakeholders</b>	
7.4.	<b>Other benefits</b>	
8.	<b>Future Roadmap/ Sustainability</b>	<b>11-12</b>
9.	<b>Teaching Notes</b>	<b>13-16</b>
10.	<b>Abbreviations</b>	<b>17</b>

## **1. EXECUTIVE SUMMARY**

In the modern world, usage of mobile (smart) devices amongst the public is exponentially growing year-on-year and outpaces other channels of communication. This generates a tremendous opportunity to deliver public services through the mobile platform and has potential to transform the face of Citizen Service delivery across the State. With the advent of mobile technology and its reach to the general public, it is imperative to innovate Citizen Service Delivery through Mobile App. Hyderabad City Police Department has envisioned Citizen Services Delivery through Mobile Technology which in turn resulted into an end product called Hawk Eye. It integrates the Police communication network system for prompt response to citizens. It also serves as a tool in improving the operational efficiency of the Police and in enhancing collaboration between Public and Police, particularly for establishing a Safe and Smart Hyderabad City. This tool emphasizes police to achieve its primary function/objective to respond to Citizens' reports/complaints for assistance in emergencies in the shortest possible time with appropriate resources.

## 2. INTRODUCTION

The unique feature of Hawk Eye is integrating the Police communication network system for prompt response to citizens. It also serves as a tool in improving the operational efficiency of the Police and in enhancing collaboration between Public and Police, particularly for establishing a Safe and Smart Hyderabad City. This tool emphasizes police to achieve its primary function/objective to respond to Citizens reports/complaints for assistance in emergencies in the shortest possible time with appropriate resources. Efficient response is critical in building up the confidence and courage in Public. Though, a common man every day comes across several crimes/issues, violations etc., they don't tend to report to Police, as they feel it is a cumbersome and time consuming process.

Existing demographic spread of the application-

#	Particulars	User Base	% Coverage
<b>A</b>	<b>TOTAL REGISTERED USER BASE</b>	<b>2,57,353</b>	<b>100.00%</b>
1	Android User Base	1,85,264	74.16%
2	IOS User Base	72,089	25.84%
<b>B</b>	<b>GEOGRAPHICAL USER BASE</b>		
1	Hyderabad City	2,42,262	83.01%
2	South (Bengaluru / Chennai)	12,738	13.96%
3	West (Mumbai / Pune / Ahmedabad)	1,867	2.41%
4	North (New Delhi)	323	0.42%
5	East (Kolkata)	163	0.20%

## 3. OVERVIEW OF THE CHAMPION

Sri M. Mahendar Reddy is the Commissioner of Police, Hyderabad City since June, 2014. He served in the districts of Karimnagar, Guntur, Adilabad, Nizamabad, Kurnool and Hyderabad City in various capacities holding Managerial/Leadership positions in AP/Telangana Police Department. He has also served as a Faculty Member at SVP National Police Academy at Shivarampally, Hyderabad, a premier National Police Training Institution where officers of Indian Police Service from all over the country are trained. Reddy went on study tours to USA and UK and acquainted himself with Police Systems in the respective countries, served as Commissioner of Police, Cyberabad for about four years. He contributed for Technology improvements in Police Department while serving as IGP, Police Computer Services & Standardization. He was Chief of Grey Hounds, a Commando Organisation fighting Naxal violence before taking over as Chief of Intelligence Department, Government of Andhra Pradesh where he served for 5 years. He has taken up several initiatives to transform Hyderabad City Police into a People Friendly Responsive Organisation using Technology innovations driving towards SMART Policing objective.

## 4. PROJECT OVERVIEW/HISTORY OF THE PROJECT

Major Bottlenecks/Challenges that have been identified prior to this project are as follows:

- Immediate response to general public, through a streamlined integration of Police Communication Network,
- Collaboration between Public and Police for achieving smart Hyderabad
- Response to Citizen Report/complaint for assistance in emergencies,
- Streamlined workflow mechanism for tracking complaint such as crime against women, Traffic violations, information regarding occurrence of crime etc.
- An automated citizen friendly responsive system to ensure safety of women while travelling.
- Instant transfer of information with respect to Save our Souls (SOS) in case of any distress or panic situation
- Making a common man to serve the society for general policing services
- Instant information on Traffic violations/congestions, processions etc.

## **5. SITUATION IN CHAMPION'S STATE/ DISTRICT**

**5.1 Beneficiaries-** Citizens of Hyderabad City, Police Department, Other Government Agencies

### **5.2 Problems identified:**

- No instant information exchange model available except dial 100
- Missing of streamline workflow mechanism for internal monitoring of complaints, instant information exchange, ready response by concerned officers and also monitoring by higher officials.
- No instant service is available for women safety in case of distress or panic
- One-to-one communication with respect to traffic alerts, violations, diversions etc.
- Trend analysis and follow up

### **5.3 Strategy Adopted-**

#### **5.3.1 Details of base line study done:**

- Study done to identify the best methodology for instant Information exchange between Police and Public has been taken up on top priority
- Identification of best means of direct communication to the Citizen.
- Identify the best possible solution to achieve quick response from Police in case of distress or panic,
- Immediate hand on information availability to a common man with respect to traffic updates and alerts etc.

**5.3.2 Roll out/implementation model:** With the advent of mobile technology and its reach to the general public, it is imperative to innovate Citizen Services delivery through Mobile App. Hyderabad City Police Department has envisioned Citizen Services Delivery through Mobile Technology which in turn resulted into an end product called "Hawk Eye". The unique feature of Hawk Eye is integrating the Police communication network system for prompt response to citizens. It also serves as a tool in improving the operational efficiency of the Police and in enhancing collaboration between Public and Police, especially for establishing a Safe and Smart

Hyderabad City. This tool emphasizes police to achieve its primary function/objective to respond to Citizen's reports/complaints for assistance in emergencies in the shortest possible time with appropriate resources. Efficient and timely action/response is critical in building up the confidence and courage in Public. Though, a common man every day comes across several petty crimes/issues, violations etc., they hesitate report to Police, as they feel it is a cumbersome and time consuming process. The key objectives of the Hawk Eye Mobile App are multi-fold - to enhance the access to Citizen services delivery for core services access to Police by the Citizens for quick and effective response, improved visibility and transparency, instant responsiveness to Citizens at any point of time, improvement of Citizen services, throughout on-time service delivery, disseminate information regarding citizen services, adoption and effective use of technology that helps directly to the Citizens, interactive App to log, track and monitor various services and information by the Citizen.



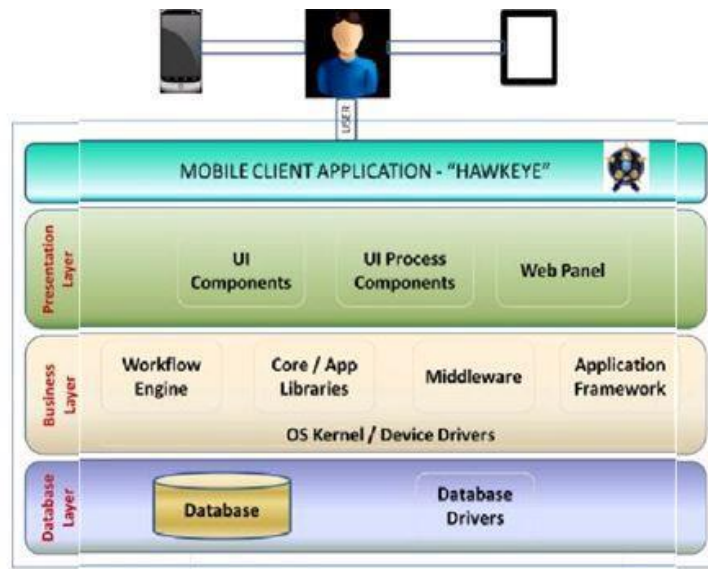
**5.3.3 Communication and dissemination strategy and approach used:** In view of the above, it is essential to facilitate access to Police using a Streamlined Work Flow embedded Mobile Application through their smart phones and tablets to file complaints such as Crime against women, Traffic Violations, and any immediate information regarding occurrence of crime etc., and also for posting information relating to women safety while on travel, servants/workers/tenants, enrolment of citizens as Citizen Police Officer for Community Policing, violations by police, etc. Hawk Eye was a result of this thought.

## 6 MODALITIES OF THE NEW SYSTEM (SOLUTION)

### 6.1 Technology Platform used

#### 6.1.1 Description- Mobile Platforms: BR 1.0 – Supports Android & iPhone

- Android – version 2.0 and above
- iPhone – version 4.0 and above



**6.1.2 Interoperability-** Interoperable over web, Mobile and tablets, XML interoperability.

**6.1.3 Security Concerns-** Application level security by Cert-In – Empanelled agency, Strategy for Disaster Recovery and service continuity

- Hosted on CGG Servers at CGG Data Centre
- Following CGG Disaster Recovery and Business Continuity Plan

**6.1.4 Service Level Agreements (SLAs)-** Service level agreement with M/s Venture W for development, modifications and changes.

## **6.2 Citizen Centricity**

**6.2.1 Impact on effort, time and cost incurred by user:**

- Prompt Response from Police to citizens who are in distress situations through Hawk Eye SOS feature.
- Report of any violation to Police as observed by the citizens for a prompt police action resulted in building confidence and trust.
- Crime Notifications and traffic updates are direct benefit to the Citizens for their awareness and bias for action.
- A freely downloadable Interactive and Secured Android & IOS Mobile App for Citizens to directly contact Police Officials
- Can be downloaded from Google Play and IOS App Stores
- Innovative Solution for Instant Information Exchange and Immediate Response.
- Streamlined Work Flow Mechanism for internal Monitoring
- Aadhaar Integration for checking Tenants and Utility service providers credentials

**6.2.2 Grievance mechanism:** Briefly describe the impact and value addition through adaption of Social media platforms for the project. Facebook and Twitter integration led to wide spread awareness in general public about the usage. The feedback and suggestions posted by the users gives a value addition and helps the Department in analyzing the effectiveness of the initiative

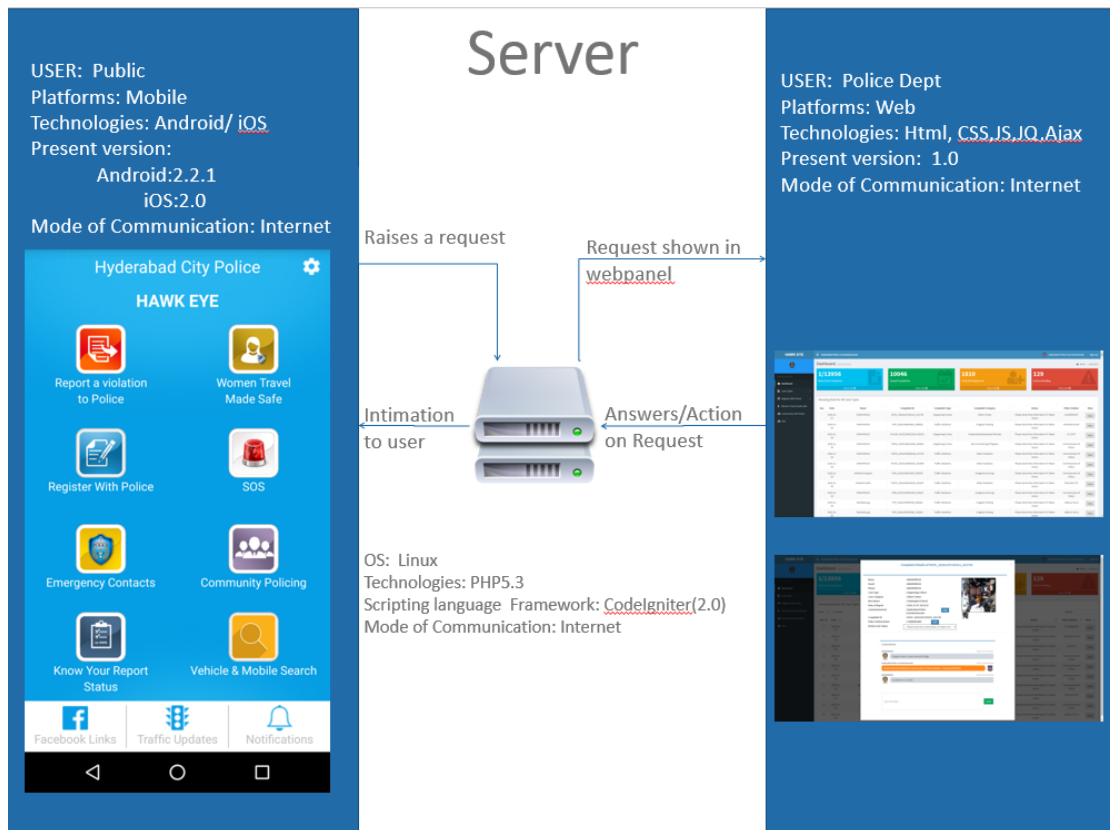
**6.2.3 Audit Trails:** Failed logins, exceptions handling, archival log, periodic review of audit and automated alert mechanism in case of intrusion.

**6.2.4 Interactive platform for service delivery:** Android, iOS, Web based.

### **6.3 Demonstrate Innovation in use of Mobile Technology for e-governance**

- Carving this as a “One Stop Single Sign-on Info APP”
- Integration of lost mobile/stolen mobile data by providing an IMEI based search to have a ready hand in information regarding stolen mobiles, so that a Citizen can find the authenticity of the mobile he wants to purchase.
- Integration of stolen vehicle data for immediate information to public about Stolen vehicles, based on search of vehicle no. chassis/engine no. etc.
- Information relating to cab drivers so as to make the women travel safer.
- In case of distress/panic, immediate information to Mobile Patrol Officers, with a dynamic link and pinpoint hovering of Victims Position on a MAP, through tracking of GPS coordinates which in turn enabled to initiate an immediate responsive action by avoiding further delay and preventing Crime.
- On hand information and dynamic linking of Aadhaar based Authentication enabled the Common Man to know the genuineness of the personnel with respect to Tenants, Servants and other Utility Services. It also helps the Police Officers to have a strict watch over suspected offenders.
- Traffic alerts on traffic jams, diversions etc., considerably reduces the travel time and plan the journey accordingly and also acts as a ready on hand traffic information tool for common man.
- Immediate information to higher officials resulted in monitoring the subordinates’ performance, and thereby improving the working efficiency and result orientation.
- Report of any violation to Police as observed by the citizens for a prompt police action resulted in building confidence and trust.
- Crime notifications and alerts created a sense of awareness among general citizens on the crime related happenings across the city.
- Enhanced communication across Police officials improved transparency.





## 6.4 Adaptability Analysis

- Portable, scalable across all android, iOS versions web based solution for internal communication and monitoring.
- English interface only.
- Application designed as per industry standards so as to achieve adoptability and scalability across all android and iOS versions.
- An easily downloadable App available in Google and Apple play stores.

**6.5 New Model of Service Delivery:** Google play store for android, App Store for iOS and Web based.

## 6.6 User Convenience:

**6.6.1 Service delivery channels:** Through email and SMS alerts.

**6.6.2 Completeness of information provided to the users:** Prompt and desired information at a high response rate

**6.6.3 Accessibility (Time Window):** Immediate

**6.6.4 Facility for online/offline download and online submission of forms:** Mobile based app can be downloaded from Play store and App Store

**6.6.5 Status tracking: Instant Status Updates:** Automatically gets delivered to the user – as Notifications

## 6.7 Efficiency Enhancement

### 1. Volume of Transactions Processed

#	App Sessions	Total Hits
1	Reports Screen	18,68,661
2	Login Screen	9,21,991
3	Home Screen	7,35,308
4	Login Activity	5,90,778
5	Police Station Details	3,85,568
6	Anonymous Screen	2,38,168
7	Women Travel Screen	1,59,727
8	Post Report Screen	1,63,393
9	Registration Screen	2,78,565
10	Report Status Screen	1,38,565
	Concurrent Users per second	18

### 2. Coping with transaction volume growth

#	Particulars	User Base	% Coverage
<b>A</b>	<b>TOTAL REGISTERED USER BASE</b>	<b>2,57,353</b>	<b>100.00%</b>
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5	East (Kolkata)	163	0.20%

### 3. Time taken to process transactions: Immediate

### 4. Accuracy of output: 100% accuracy

### 5. Number of delays in service delivery: Services delivered with accuracy and quick response to resolve the issues

## 7 IMPACT ON THE STAKEHOLDERS/BENEFICIARIES

### 7.1 To organization/Government

This tool emphasizes police to achieve its primary function / objective to respond to Citizen's reports / complaints for assistance in emergencies in the shortest possible time with appropriate resources. Efficient and timely action / response are critical in building up the confidence and courage in Public. Though, a common man every day comes across several petty crimes / issues, violations etc., they don't report to Police, as they feel it is a cumbersome and time consuming process.

## **7.2 To citizen**

- Police Services available at finger tips through smart devices for the stakeholders to instantly report any Service Request, report incidents and know the up-to-date status without visiting the police stations and direct interactions with the police.
- The App based services have built the trust and confidence on the police; also provided transparency to the police on the citizen reported requests/incidents with transparency and visibility to listen to the citizen and prioritize for resolution.
- Any service request or incident reaches in the police net instantly the moment it is reported for quick action with central monitoring.
- This service has provided women an option of reporting their movements while travelling in a public transport for the safety and security.
- Also SOS option has boosted the confidence for women in case of distress/panic situation as the information floats to various police authority layers for immediate action to avoid any unwarranted situations by tracking the crime incidents and criminals.

**7.3 Other Stakeholders:** Other State Government wings of the city as GHMC, Electricity, Revenue, Court, Transport Department, other District Police of the state.

## **7.4 Other Benefits:**

- Facility to report as anonymous
- Emergency responsive system through SOS- GPS Linkup
- Around 12000 complaints/violations have got reported, 80% of which are attended and solved.

## **8. FUTURE ROADMAP/SUSTAINABILITY**

In Order to make Hawk Eye as "One Stop app for all the Solutions" embedding the following services into Hawk Eye:-

1. Lost-Report App into: This is to ease the process of acquiring a Digitally Signed Certificate, for the Lost Articles/Documents within a time period of maximum 3 Days.
2. Job Connect: To Provide the Youth, with the available Employment Notification with respect to Private Sector. - Community Felt Need.
3. Dial 100: To provide the Police with the Location Accuracy, to reach the complainants of Dial 100 System. - Zero Tolerance to Crime.
4. Women Travel Made Safe with 360 Degree Monitoring. - To ensure Complete Security to the Women.
5. BHAROSA - The Support Centre for Women & Children. Citizen/User can directly report or contact the Help Centre for their grievances to resolve.
6. M-Wallet: Incorporating Services of M-Wallet mobile application of Transport Department, Govt. of Telangana. Facilitating the Commuters to show digital documents like license, insurance, road transport etc.
7. Tenant /Servant Registration: Featuring the Web-Panel to update the verification - status to the citizens, regarding the Personnel Registration.

8. In order to see that, citizens are connected with the Police through all possible ways.
9. To ensure protection and monitoring by Hyderabad City Police with the Global Standards.

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## 9. Teaching Notes

### **Hawk Eye- an initiative by Hyderabad City Police Department to deliver public services via mobile platform**

#### **1. OVERVIEW**

In the most modern world, usage of mobile (smart) devices amongst the public is exponentially growing and outpaces other channels of communication. This generates a tremendous opportunity to deliver public services through the mobile platform and has potential to transform the face of Citizen Service delivery across the state. With the advent of mobile technology and its reach to the general public, it is imperative to innovative Citizen Service delivery through Mobile App. Hyderabad City Police Department has envisioned Citizen Services Delivery through Mobile Technology which in turn resulted into an end product called Hawk Eye. The unique feature of Hawk Eye is integrating the Police communication network system for prompt response to citizens. It also serves as a tool in improving the operational efficiency of the Police and in enhancing collaboration between Public and Police, particularly for establishing a Safe and Smart Hyderabad City. This tool emphasizes police to achieve its primary function/ objective to respond to Citizens reports/complaints for assistance in emergencies in the shortest possible time with appropriate resources.

#### **2. TEACHING OBJECTIVES**

##### **➤ Learning Objectives**

- As-is situation analysis and identification of pain points in the existing delivery process.
- Importance of innovation and technology to bring transparency and proper accountability.
- Expected outcomes and ease in processes due to the project.

##### **➤ Challenges/Issues Faced**

- No instant information exchange model available except dial 100
- Missing of streamline workflow mechanism for internal monitoring of complaints, instant information exchange, ready response by concerned officers and also monitoring by higher officials.
- No instant service is available for women safety in case of distress or panic,
- One to one communication with respect to traffic alerts, violations, diversions etc.,
- Trend analysis and follow up

##### **➤ Ways to Improve the Situation**

With the advent of mobile technology and its reach to the general public, it is imperative to innovate Citizen Services delivery through Mobile App. Hyderabad City Police Department has envisioned Citizen Services Delivery through Mobile Technology which in turn resulted into an

end product called “Hawk Eye”. The unique feature of Hawk Eye is integrating the Police communication network system for prompt response to citizens. It also serves as a tool in improving the operational efficiency of the Police and in enhancing collaboration between Public and Police, especially for establishing a safe and smart Hyderabad City. This tool emphasizes police to achieve its primary function/objective to respond to Citizen’s reports/complaints for assistance in emergencies in the shortest possible time with appropriate resources. Efficient and timely action/response is critical in building up the confidence and courage in Public. Though, a common man every day comes across several petty crimes/issues, violations etc., they don’t tend to report to Police, as they feel it is a cumbersome and time consuming process. The key objectives of the Hawk Eye Mobile App is multi-fold - to enhance the access to Citizen services delivery for core services access to Police by the Citizens for quick and effective response, improved visibility and transparency, instant responsiveness to Citizens at any point of time, improvement of Citizen services and throughout time on services delivery, disseminate information regarding citizen services, adoption and effective use of technology that helps directly to the Citizens, interactive App to log, track and monitor various services and information by the Citizen.

### 3. SUGGESTED QUESTIONS & ANALYSIS

#### a) **What changes were brought in the system using the Hawk Eye Project?**

- Prompt response from Police to citizens who are in any distress situations through Hawk Eye SOS feature.
- Report of any violation to Police as observed by the citizens for a prompt police action resulted in building confidence and trust.
- Crime notifications and Traffic updates are direct benefit to the citizens for their awareness and bias for action.
- A freely downloadable interactive and secured android & IOS mobile app for citizens to directly contact Police officials
- Can be downloaded from Google Play and IOS App Stores
- Innovative solution for instant information exchange and immediate response.
- Streamlined work flow mechanism for internal Monitoring
- Aadhaar integration for checking tenants and utility service providers credentials

#### b) **How Hawk Eye Project has helped in increasing efficiency and effectiveness in the system?**

- Volume of Transactions Processed

#	App Sessions	Total Hits
1	<i>Reports Screen</i>	18,68,661
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	<b>Concurrent Users per second</b>	<b>18</b>

- Coping with transaction volume growth

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5	East (Kolkata)	163	0.20%

- Time taken to process transactions: Immediate
- Accuracy of output: 100% accuracy
- Number of delays in service delivery: Services delivered with accuracy and quick response to resolve the issues

**c) What are the distinctive features or accomplishments of the project?**

- Design this as a “One Stop Single Sign-on Info APP”
- Integration of lost mobile/stolen mobile data by providing an IMEI based search to have a ready hand in information regarding stolen mobiles, so that a citizen can find the authenticity of the Mobile he wants to purchase.
- Integration of stolen vehicle data for immediate information to public about stolen vehicles based on search of vehicle no., chassis/engine no etc.
- Information relating to cab drivers so as to make the women travel safer.
- In case of distress/panic, immediate information to Mobile Patrol Officers, with a dynamic link and pinpoint hovering of Victims Position on a MAP, through tracking of GPS coordinates which in turn enabled to initiate an immediate responsive action by avoiding further delay and preventing Crime.
- On hand information and dynamic linking of Aadhaar based authentication enabled the common man to know the genuineness of the personnel with respect to tenants, servants and other utility services. It also helps the Police Officers to have a strict watch over suspected offenders.
- Traffic alerts on traffic jams, diversions etc., considerably reduces the travel time and plan the journey accordingly and also acts as a ready on hand traffic information tool for common man.
- Immediate information to higher officials resulted in monitoring the sub ordinates performance, and thereby improving the working efficiency and result orientation.
- Report of any violation to Police as observed by the Citizens for a prompt police action resulted in building confidence and trust.
- Crime notifications and alerts created a sense of awareness among general citizens on the crime related happenings across the city.
- Enhanced communication across Police Officials improved transparency.

#### 4. **CLASSROOM MANAGEMENT**

##### ➤ **Group Discussion**

Divide the participants in groups of 4-5 and discuss the case on following aspects. Each group should take one aspect:

1. Discuss Change management and Communication as some of the key factors to project success.
2. Challenges, issues and risks if the project is to be rolled across other States.
3. What is next for the project?

Please have an open brainstorming session regarding how this project can be evolved and replicated in other states. Each group should present their findings in a short 5-10 minutes presentation afterwards.

##### ➤ **Summary- Key lessons learnt (15 minutes)**

Each participant shall write down a summary in not more than 500 words highlighting key learning from the case.

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## **10. ABBREVIATIONS**

SLAs	Service Level Agreements
SOS	Save our Souls