

Understanding GPR for e-Gov Projects (Through a Case Study: ePASS Project)

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Identification of Problem Statement

- To address the specific concerns of the stakeholders (citizens/ businesses/ employees)
- To address the challenges and issues in the services and service delivery
- To improve the quality of the services
- To adopt best practices from similar environments
- To address the changing needs of the customers (citizens and businesses) and the government

Methods of Problem Identification

- There are various ways by which the problems in a process environment are identified.
- These include proactive and reactive ways of problem identification.
- Since these methods reflect the customer's opinion (both internal and external) they are referred to as "Voice of the Customer" (VoC).
- The major sources of problem identification are depicted below: In most government situations the problems are identified by reactive methods.

GPR MAPS

APPROACH TO GPR



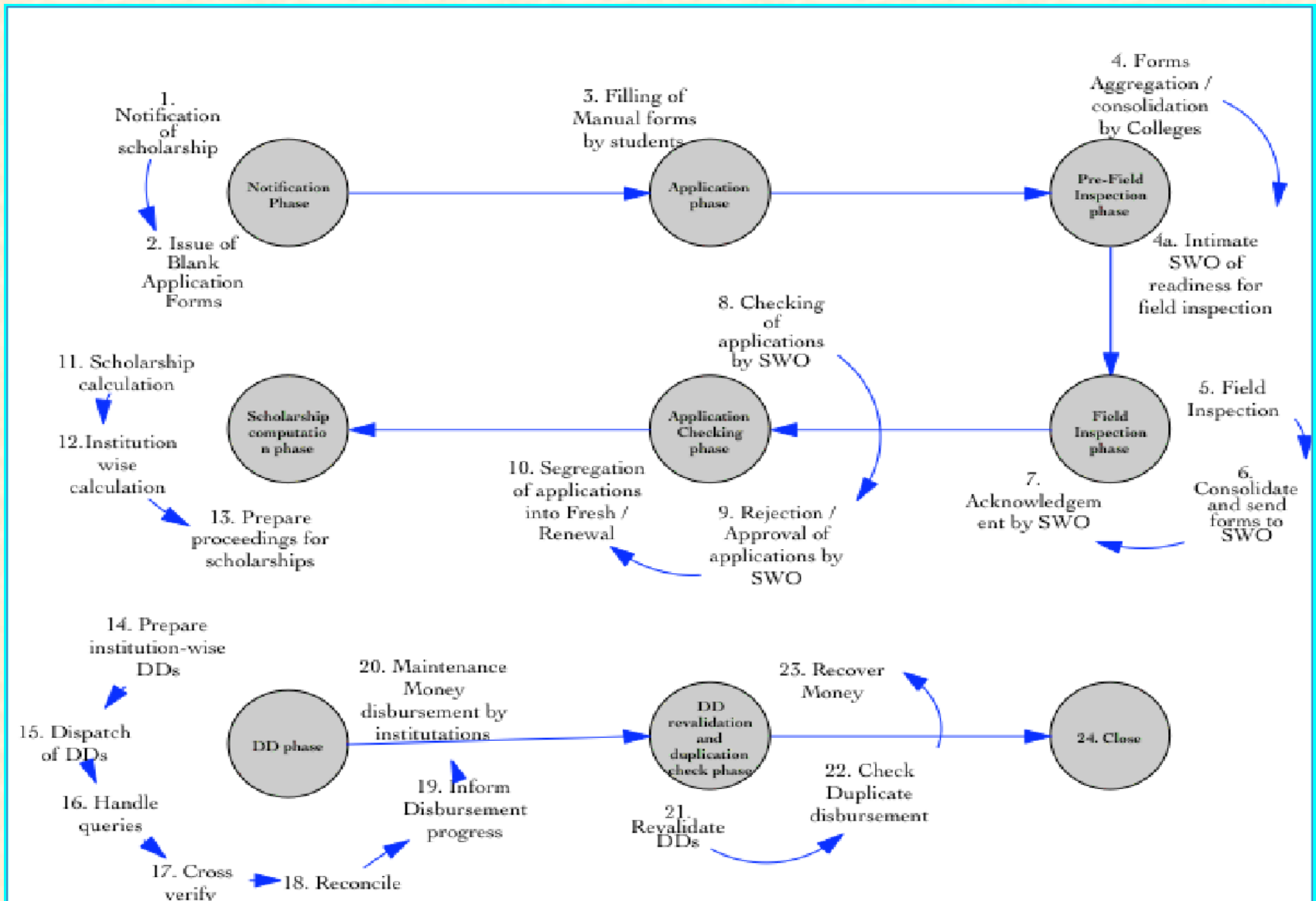
ePASS-STAKE HOLDERS

DEPARTMENTS	STUDENTS / BENEFICIARIES	COLLEGES/ INSTITUTIONS	UNIVERSITIES / BOARDS
HOSTELS	CETs/ COUNSELLING	SCHEMES	MEE SEVA / UIDAI
TREASURY	BANKS	OTHER DEPARTMENTS	OTHER STATES/ GoI
PMU	NODAL DEPT	IT SERVICE PROVIDER/CGG	H/W, INFRASTRUCTURE / SECURITY
DOCUMENTATION	TECHNOLOGY	SOCIAL / SECURITY AUDIT	AWARDS

DEPARTMENTS

- Started with 4 Departments for Post Matric Scholarships:
 - Social Welfare
 - Tribal Welfare
 - BC Welfare
 - Disabled Welfare
- Added EBC
- Minority Welfare is operating separately through NIC
- Later MW merged in ePASS

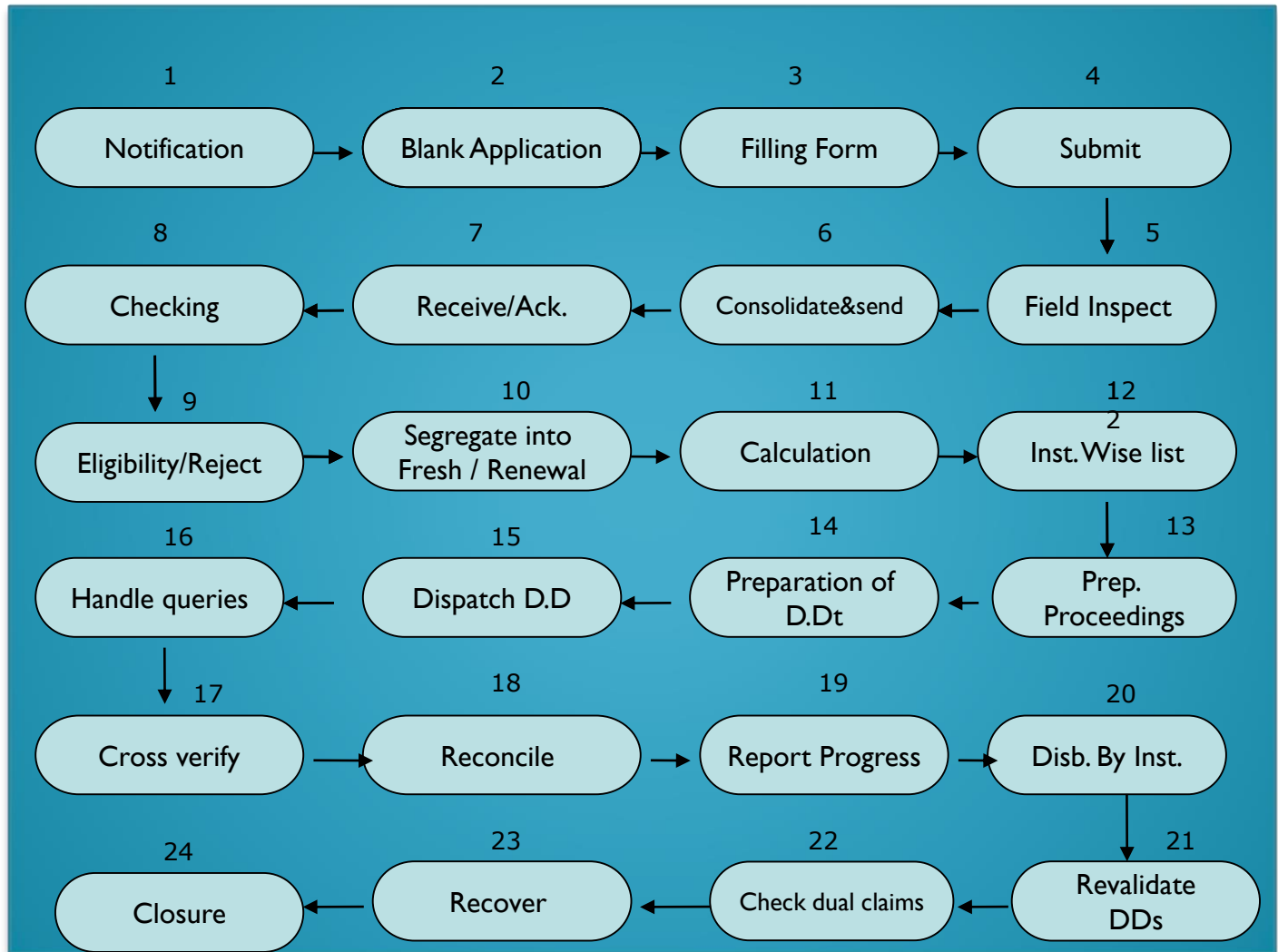
As-Is Process



AS-IS PROCESS

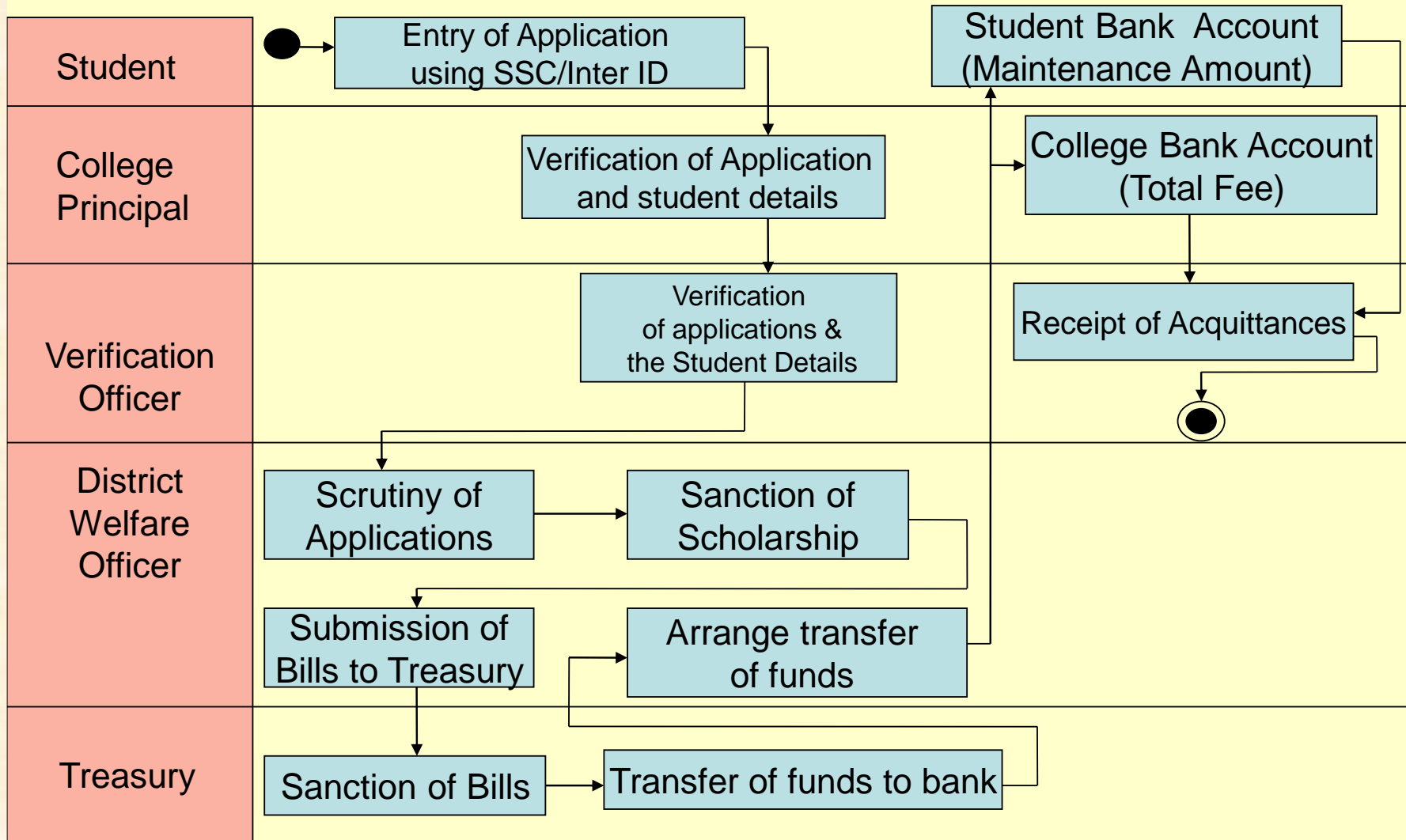
MANUAL PROCEDURES - CUMBERSOME

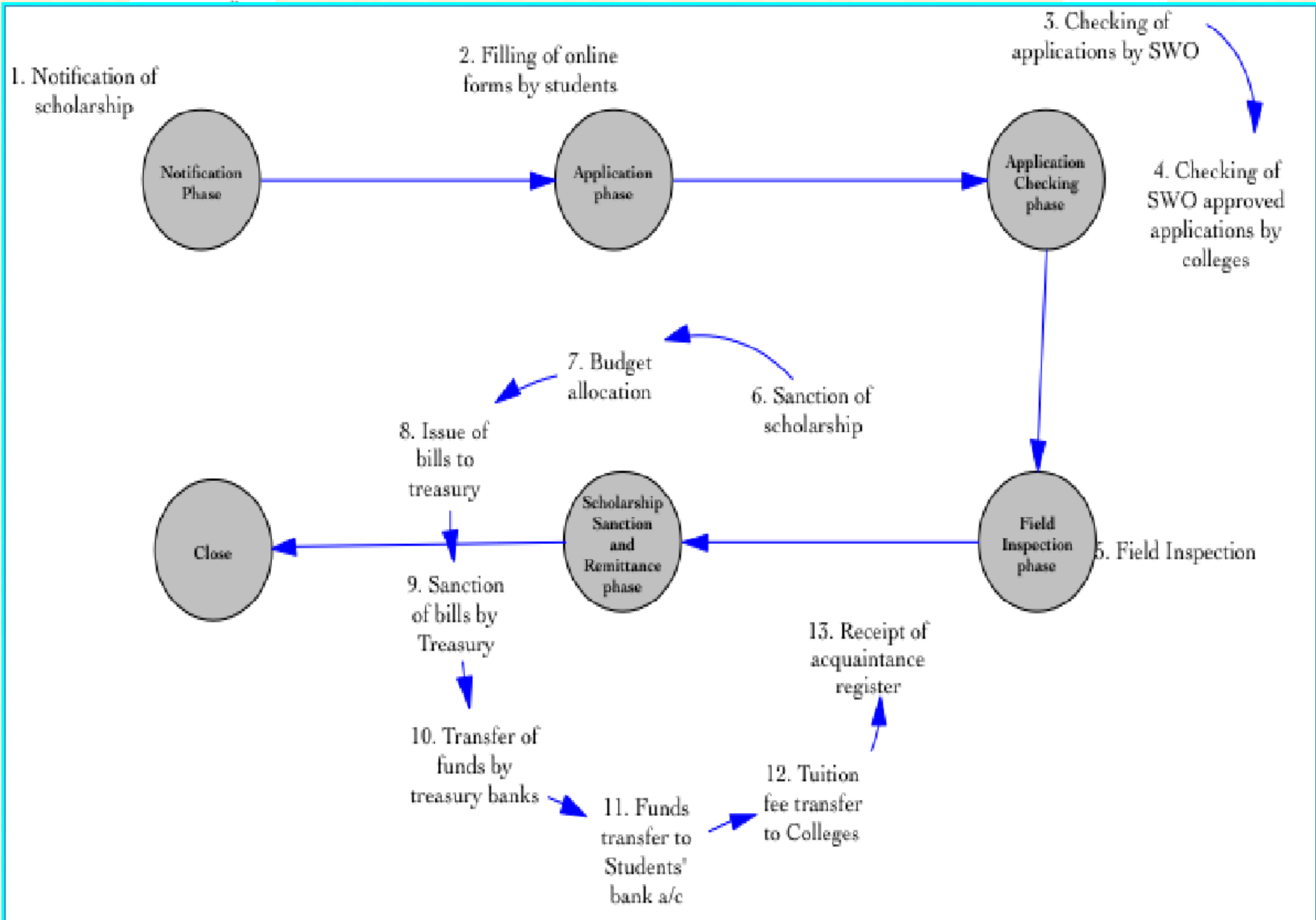
- Manual process - Cumbersome & Time consuming,
- Large number of scholarships
- Less Staff
- Unable to cope up with work load
- Corruption
- Frustration in the student community



ONLINE WORKFLOW OF THE ePASS SYSTEM

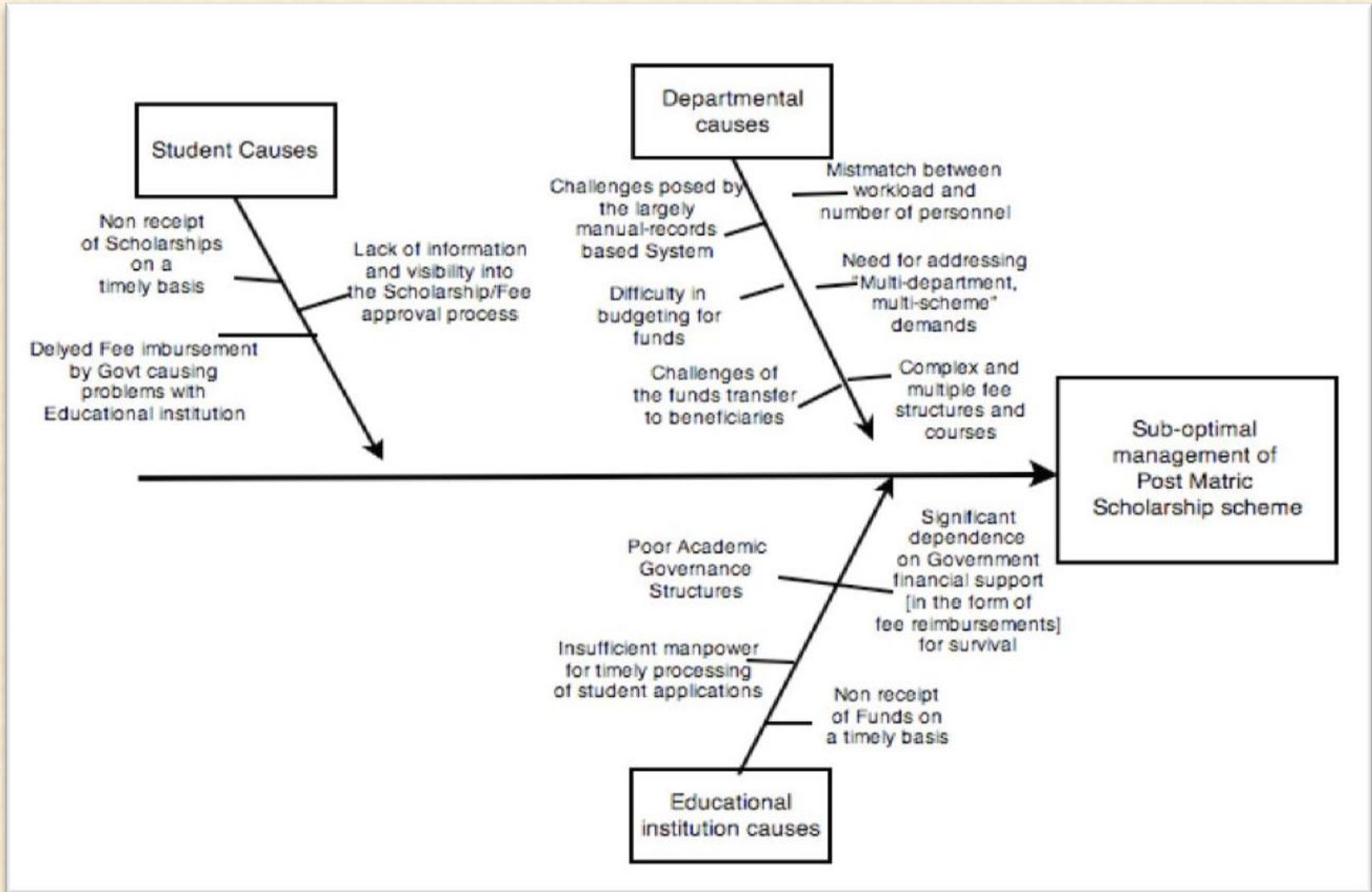
Post-Matric Scholarships





The process flow chart after first GPR is depicted in figure below:

NECESSITY AND CRITICAL STEPS INVOLVED IN GPR (Fish Bone Diagram)



ePASS-GPR

- There were several reasons for the sub-optimal performance of the post matric scholarship scheme.
- For the students, the problems included rejection of application with no adequate reason provided, no payment or few years' delay in release of scholarship and such like.
- The SW department was facing major issues of bogus and duplicate claims, and inability to verify caste, income certificates and academic records in time bound manner due to large volume of applications.
- These problems led to wastage of government funds and inordinate delay in scholarship disbursement for even the genuine students.
- Therefore, scholarship processes needed to be revamped.

ePASS-GPR

- The first important initiative for the ePASS project was constitution of the high power core group/committee headed by the Chief Minister. The committee was empowered and given full liberty to change the government processes, wherever needed.
- Technology selection for ePASS was the next step.
- Java based open source technology was chosen by the group due to free availability of Java based tools, adequate security provisions and ability to be implemented on general purpose computer servers and PCs.

Rules-Considered as guiding theory for any (GPR) initiative

1. Elimination: As part of elimination, those processes are removed which are not required due to reasons, such as:

- Inefficient process, Painful to use, No more valid, Does not add any value

•These processes were not required after the first iteration of GPR:

- Obtain hardcopy blank Application Forms , Filling of forms by students in the college in triplicate ,Forms submission by colleges

- **Verification is manual**

- Verification is to be done by each department
- Only College level applications are collected and college wise verification is done
- All students can't be verified on the same day

ePASS-GPR

- In the first iteration, field inspection, was retained.
- During second iteration it was replaced with AADHAR database verification avoiding field inspection totally.
- Field inspection was proving cumbersome since the days when inspection was being carried out, many students were not present.
- Further, it was not possible for field inspectors to check and verify all records for each student, thereby creating scope for false entries and corruption. With AADHAR database-based verification, the corruption issue was arrested and 100% verification became possible without requirement of field visit.
- During institute level verification, student fingerprint was captured and verified with AADHAR database.

ePASS-GPR

- Maintenance (MTF) money disbursement by institutes underwent a major change.
- Initially, SBI cards to students were issued after the first phase of GPR.
- Based on their eligibility, each card cash withdrawal limit was fixed.
- However, there were problems with issuance of cards by the institutes and, therefore, money was transferred to student account in second phase of GPR and students could withdraw money using usual bank facilities.

OPTIMIZATION

- After the first phase of GPR in ePASS, basic student data like student name, father's name, marks etc. were picked from SSC / Intermediate database using the student SSC hall ticket number.
- Similarly, caste and income certificate data was populated in ePASS portal automatically from the MeeSeva portal.
- This way data entry errors and duplication were avoided and processes were optimized.

INTEGRATION

- Redesign SSC/ Intermediate board database such that read-only access to ePASS portal was available
- Read-only access to AADHAR database and verification of student credentials using finger print.
- University database: Students could select courses from university portal through single window with full clarity on course duration, its structure etc.
- Access to Meeseva portal for caste, cash and income certificate data
- Access to Counseling Data
- Access to Results Data

AUTOMATION

- Form / data is validated logically and automatically
 - Standard logic is used all across and data is processed on set rules and logic
 - Automation logic is developed for report processing
 - Process controls are designed and automated
 - Reiterative processes are addressed
 - Focus is on work flows
 - There is automatic communication to different / interwoven processes
- In ePASS, scholarship calculation of student and institute wise amount, reports on proceedings for administrative approval, preparation of treasury bills based on availability of budgets, and other reports were generated automatically for all stakeholders.

ISSUES AND CHALLENGES

- Internet access to ePASS:
 - CGG increased bandwidth for faster access or access to colleges may be schedules so that traffic on server and internet is lowered
 - Administrative Issues at colleges:
- Students generally were not taking the scholarship online entry seriously and colleges were forcing them to complete the activity.
- It was proposed by colleges that basic information data entry may be completed by students before they report to colleges for admission.

ISSUES AND CHALLENGES

- **AADHAR data base related issues**
- ePASS displays same error during AADHAR verification - Duplicate AADHAR entry
- / student already exists or data did not match. Proper error handling message might be displayed for different situations.
- When AADHAR database verification failed at college level, colleges were asking students to go to AADHAR centre for correction of data / finger print etc. AADHAR centres were not working in time bound manner (keeping in view last date of scholarship application) to help students. Follow up with AADHAR centre did not help students. It was reported that about 3 – 4 % students, who looked genuine as per college records, lost scholarship / seat as proper assistance from AADHAR centre was not available till last date.
- There were no clear fixed specifications for biometric equipment. It was observed that optical type devices were cheaper but were less accurate while capacitive type devices were accurate but expensive. Colleges using optical devices often had reported data sets / figure pint not matching.

Administrative process issue


- **Government related:** AP State treasury did not work on softcopy communication and expected hard copy of the approved bills.
- Some time it led to errors and many times delays, as data entry was required at treasury level. A proper system might be evolved so that treasury could have received softcopy / electronic communication along with hard copy communication, to avoid delays and errors.
- This might have allowed checking the budget approvals electronically.
- This process would have also helped to push of electronic bills to the tune of approved budgets.
- A proper formula can be decided in such a way that if lesser budget is available, payments can be processed on pro-rata bases.

3. KEY CHALLENGES FACED BY THE INNOVATORS

- a. **Large student database and duplicate entries:** Centralised and electronic disbursement of scholarships, previously handled by multiple departments, requires the compilation of large and fragmented student data bases and weeding out duplicate entries. While the student database was already created by SBMS which preceded ePASS, large number of erroneous/duplicate/fake entries had to be eliminated. Records of close to 15 lakh students (in the initial stage; close to 28 lakhs today) spread across 10944 colleges (close to 13600 today) and handled by four departments (one more was added later) had to be examined for weeding out ineligible entries.

It was therefore decided to use a unique ID as entry for registrations which will act as the primary key to identify each student record. The Senior School Certificate (SSC) ID of the students is currently being used as the unique ID. Over the years, the ID has helped weed out duplicate/ double claims and has brought substantial financial savings for the Departments. Efforts are being made to make the database Aadhar-compliant by linking the SSC ID with Aadhar numbers of students.

- b. **Population of Course Fee structure:** As ePASS aimed to create a transparent application and payment system, providing the course fee structure of all participating colleges was a key requirement. More than one lakh entries had to be made across colleges and their courses. This was achieved by giving facility to Universities/Boards for entering course fee details which were later validated by the Project Monitoring Unit (PMU). About 1,44,000 fee entries to be made.

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- c. **Informing the changed application procedures to student community:** Familiarising the students with the new system was a major challenge for the success of the initiative. In order to address this issue, the Joint Director (Social Welfare)/Deputy Director (Social Welfare)/Project Director, Women Development & Child Welfare/ District Tribal Welfare Officer/District Backward Classes Welfare Officer/ Assistant Director, Welfare of Disabled and Senior Citizens were made responsible for giving wide publicity about the procedure for sanction of Post- Matric Scholarships online every year at least one month before the beginning of the Academic Year. The communication campaign focuses on facilitating the students to apply online for the Fresh/ Renewals scholarships and opening of savings bank account by the students in any branch belonging to any of the five nodal banks.
 - d. **Overcoming the resistance from staff:** The introduction of the new system generated resistance from several stakeholders, primarily officials, due to the difficulties involved in shifting to a new and unfamiliar system and the vested interests associated with the opaque manual system. Efforts were made to minimize the resistance by frequent capacity building workshops and personal interactions. Political will and bureaucratic commitment acted as key enablers for ushering in smooth change.
 - The compulsion of going through the automated workflows during implementation without scope for any manual overrides also became a major factor for psychological acceptance of the project. During each monthly video conference, the enhancements and version changes are explained and doubts cleared. Workshops are held once in 2 months to discuss required changes. Officials can send queries or doubts through email or SMS to the help desk at PMU which replies to them and escalates unresolved issues to higher levels.

KEY LESSONS

- **Creation of empowered core committee**
 - HSC / Intermediate board data base for on line
 - University / colleges courses and hostel fee structures
 - Using Mee Seva Services
- AADHAR data base read only access for various schemes
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SELF SERVICE

- Student was able to track the status of scholarship application, maintenance amount transferred to student's scholarship account and alerts on credit and withdrawal.
- Institutes were able to track tuition fee approval, rejected student list, amount approved by social welfare office and payment status etc.

STANDARDIZATION

- In ePASS GPR, a common form was created so that universities/ institutes could enter information like:
 - » Courses offered with their structures, Course duration, Fee details, List of affiliated colleges, Hostel facility and associated charges
- The above data was checked by social welfare department once and rules were created for its full or partial re-imburesements,
- This has avoided cross-checking data every time with each individual student.

What it is today....

- Multi-Departmental: Disbursement for five welfare Departments (BC,EBC,SC,ST,DW).
- Disbursement of Tuition Fee to Colleges and Mess Charges to the Students Online.
- Disbursement to Students studying in AP and other states.
- Total web based project from Student application to transfer of Tuition / Maintenance fee to College/Student bank Accounts directly.
- *Software developed and running on complete Open Source Software (PostGre/SQL, Tomcat, Java).*
- *First of its kind in India linking Treasury and Banks.*
- *First of its kind project in India using eZ-Pay (Pre-loaded) ATM cards of SBI for student bank accounts. – 20 lakh accounts*

What it is today....

- Grievance Reddressal System for Students, Colleges, Officers.
- Unique Application ID for Student
- Change requests from HoD's through online.
- Call Centre for Students.
- Email & SMS based tracking and Grievance Reddressal System.
- Integration with SBI SFTP server for Pushing and Pulling the eZ cards data
- Data from Universities/Boards for Attendance, Performance, Fees etc.
- Data from Counseling Centre's
- Interface with Board of Intermediate for Admissions
- Data from Ration Card and Revenue Dept

STUDENTS / BENEFICIARIES

- Online Application by Student
- Single Benefit as per Eligibility
- SSC / X Class Hall Ticket Number as Unique Entry
- Offline collection of SSC data year wise in the beginning
- Later integration through Web Service
- Added Aadhaar for more uniqueness
- Removed Physical Verification of Students
- Aadhaar Authentication for verification
- No Management Quota and No Same Level Courses
- SBI eZ Pay Cards for students who can't open Bank A/Cs
- From 5 Core Banks to All Nationalized Banks for Students bank accounts
- No need of Submitting Hard Copy Certificates
- Retrieved from Mee Seva (for Income, Caste), SSC/Inter
- Data pulled from SSC, Intermediate, DOST, Counseling Centres for correctness
- Linked with Hostels for more accuracy

COLLEGES / INSTITUTIONS

- PMU will register the Colleges with basic details
- Colleges Registration Online with complete details
- Intermediate Colleges, Courses are retrieved from Inter Database. No need to Register again
- College Bank Accounts verified