SD TESTING

Prepared By: Chetan Ambadkar

Date: 08/09/2025

SITUATION

- SD Geotesting and Solutions company prepares reports manually using Excel and registers.
- Customer first sends a letter, then quotation is created and stored separately.
- After quotation confirmation, the letter goes to Inward Department, where data is manually recorded in a register and an Inward Number is generated for tracking.
- The Inward Number is written on the letter and passed to the Report Analyst.
- Report Analyst prepares reports by copying a template into customer folders and re-entering details (Inward No., Project Name, Client Name, Client No., Letter Date, Letter No.).
- Readings are entered manually for each material and report is prepared individually.

- Reports are first printed on draft pages for Quality Manager checking.
- Quality Managers manually verify letter details and readings. If mistakes are found, reports are sent back for correction, then reprinted on company letterheads.
- Finally, reports are signed by the Technical Manager and dispatched (stamped, scanned, and sent to customers in hard copy & soft copy).
- If a customer urgently needs a report or requests an old report, staff must search manually in registers and folders.
- The entire process is time-consuming, repetitive, and has high chances of errors, causing delays in customer service.

PROBLEM

- After receiving a customer letter, a separate entry is made for quotation, and again for inward department records.
- Inward department maintains both register entries and Excel tracking, leading to duplication of work.
- An Inward Number is generated and written manually on the letter before handing it to the Report Analyst.
- Report Analysts prepare reports by copying templates into customer folders and re-entering the same letter details multiple times.
- The process of preparing each report is time-consuming and repetitive.
- Draft reports are printed for Quality Manager review, who checks manually with pen corrections.
- Corrections require reports to be reworked and printed again on company letterheads.

- While printing, multiple reports have to be printed one by one with separate commands, which makes the process even slower.
- This repeated printing increases time and paper usage, causing negative impact on the environment.
- Entire workflow is manual, causing frequent delays.
- Searching for old reports requires going through registers and folders, which consumes a lot of time.
- Urgent customer requests are difficult to fulfill due to slow manual processes.
- Monthly tracking (total letters received, reports prepared, pending work, and analyst-wise productivity) requires checking both registers and Excel sheets, making it a slow and inefficient process.

OPPORTUNITY

- A centralized software – “SD Testing” can be implemented to handle all reporting activities.
- Customer letters and quotations will be directly created and stored in the software.
- Inward department will enter all details (Project Name, Client Name, Letter Date, Letter No., Materials) once only, avoiding repetitive work.
- An Inward Number will be generated and assigned to the Report Analyst.
- Report Analysts will only need to enter readings/values in the software, saving time.
- Quality Managers can check and approve/reject reports digitally, without draft printouts.

- Approved reports can be printed in bulk on company letterheads, reducing time and paper usage.
- Old reports can be retrieved instantly by searching with Inward Number, improving accessibility.
- Urgent or same-day customer report requests can be delivered quickly and accurately.
- Managers can view real-time dashboards (letters received, quotations prepared, reports completed, pending work, analyst productivity) with a single click.
- The overall process will become fast, accurate, eco-friendly, and customer-focused, ensuring timely delivery and higher customer satisfaction.

PURPOSE STATEMENT (GOAL)

The purpose of this project is to design and implement a centralized software system named **SD Testing**, which will streamline the entire reporting process of **SD Geotesting and Solutions**. The goal is to eliminate repetitive manual work, reduce dependency on registers and Excel sheets, and ensure that all customer letters, quotations, inward entries, and reports are managed within a single platform. This system will enable report analysts to quickly generate accurate reports by entering only the required readings, while Quality Managers can digitally verify and approve reports without the need for draft prints. Approved reports can be printed in bulk on company letterheads, saving both time and resources. Managers will have access to real-time dashboards to track letters, reports, quotations, and analyst productivity, ensuring complete transparency and faster decision-making. Ultimately, this project aims to improve operational efficiency, deliver timely and accurate reports to customers, and enhance overall customer satisfaction.

PROJECT OBJECTIVES

- Develop a centralized software (SD Testing) to manage customer letters, quotations, inward entries, and reports in one platform.
- Eliminate repetitive manual work by entering project and client details only once in the system.
- Enable Report Analysts to quickly generate accurate reports by entering only material readings.
- Implement digital verification and approval by Quality Managers, removing the need for draft prints.
- Provide bulk printing option for approved reports on company letterheads to save time and resources.
- Ensure instant search and retrieval of old reports using Inward Number or other filters.

- Introduce real-time dashboards for managers to monitor reports, pending tasks, quotations, and analyst productivity.
- Improve overall efficiency, accuracy, and customer satisfaction through faster turnaround and transparent processes.

SUCCESS CRITERIA

- All customer letters, quotations, inward entries, and reports should be recorded within a single centralized software system.
- Reports must be generated quickly with minimal manual effort, avoiding repeated entry of project and client details.
- Quality Managers should digitally verify and approve reports without using draft printouts, ensuring faster and eco-friendly approval.
- Approved reports should be printed in bulk on official letterheads, saving significant time and reducing paper wastage.
- Old reports should be retrieved instantly from the system using inward numbers or filters within a few seconds.
- Customers must receive accurate and timely reports, even for urgent requests or same-day delivery requirements.

- Managers should access real-time dashboards showing letters received, reports prepared, pending work, and analyst productivity.
- The system should improve overall efficiency, ensure accuracy, and enhance customer satisfaction through timely delivery of reports.

METHODS/APPROACH

- **Agile methodology** is used to develop this application. Agile is iterative development with frequent collaboration, flexibility, and responsiveness to changing requirements.
- **Scrum Team** is formed with cross-functional members including Product Owner, Scrum Master, Developers, and Testers. Roles and responsibilities are clearly defined so that each member understands their contribution.
- **Requirement Gathering & Stakeholder Collaboration** Conduct meetings, interviews, and workshops with stakeholders to understand the current manual process and business pain points.
- JAD sessions and needed elicitations techniques to gather the requirements.
- **Create Product Backlog**

  Break down the requirements into Epics and User Stories.

  Stories are prioritized based on customer value and business needs by the Product Owner.

- **User Story Workshops** are conducted with the team and stakeholders. Each story is refined, acceptance criteria are defined, and large Epics are broken into smaller manageable stories.

BV (Business Value): assigned based on benefits to business and customer.

CP (Complexity Points): assigned using Planning Poker

- **Sprint Planning:** At Sprint start, team selects high-priority backlog items, estimates them, and defines Sprint Goal.
- **Daily Scrum Meeting:** This happens each day where team will just answer 3 questions.
    - What did you do today?
    - What will you do tomorrow?
    - Are there any impediments that is slowing or stopping you?
- **Sprint Review:** At the end of Sprint, the team demonstrates working features (Increment) to stakeholders. Feedback is collected immediately and added to the backlog if new requirements arise.
- **Sprint Retrospective**

  The team reflects on the Sprint: what went well, what went wrong, and what can be improved. Improvement actions are planned and applied in the next Sprint.

- **Continuous Delivery:** Each Sprint delivers usable product increment; final Sprint makes system production-ready.
- **Go-Live & Training:** After final approval, the software is deployed to production. Training sessions are conducted for users (Report Analysts, Quality Managers, Inward Staff). Support processes are established for handling issues after go-live.

RESOURCES

- **PEOPLE:**
  Skilled team including Product Owner, Scrum Master, Developers, and Testers. Report Analysts and Quality Managers will be involved for domain knowledge. Training will be provided so that team can adapt from manual system to digital software smoothly.
- **TIME:**
  The software will be developed using Agile Scrum in multiple sprints. Each sprint will deliver working features within 2–3 weeks. Entire project is expected to be completed within **5–6 months**, including testing and user training.
- **BUDGET:**
  Project requires investment in software development, hardware setup, and training. Costs include:

  Training and services: ₹20,00,000

  Software development: ₹15,00,000

  Hardware and infrastructure: ₹10,00,000

  Total Estimated Budget: ₹45,00,000

RISK & DEPENDENCIES

Risk

- Employees may resist adopting the new software due to comfort with existing manual reporting practices.
- Data migration from registers and Excel to the new centralized system may cause delays and inaccuracies.
- Project timelines may extend if stakeholder requirements change frequently during development and testing phases.
- Budget may increase if additional training, support, or software integrations are required during implementation.

Dependencies

- Successful project completion depends on active stakeholder participation during requirement gathering and user story workshops.
- Timely availability of skilled Scrum team members, including developers, testers, and Product Owner, is essential.
- Proper hardware and network infrastructure must be ready before deploying the new centralized reporting system.
- Management support is required to approve budget, resources, and organizational changes for software adoption.
- Continuous feedback from Report Analysts and Quality Managers is necessary to ensure accuracy and usability of features.

THANK YOU