Generation of Dynamic, Data-Driven Graphic

Proposal

Techverx
Meaningful Innovations

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STARTUPS | SMBs | ENTERPRISE

Overview

The Techverx team recently conducted an introductory call with the client to understand their requirements for a system that processes Excel data, analyzes key dimensions, and generates graphical representations based on identified patterns and received detailed documents. Based on this information, we have prepared a comprehensive scope of work to define the project, ensuring accuracy, efficiency, and automation in data processing and visualization.

Proposed Solution

We propose developing a data-driven system that automates the entire process from Excel file processing to graphical output generation. The solution will streamline data extraction, sorting, mapping, and visualization, ensuring scalability, efficiency, and ease of use.

Features:

- **Upload Excel Sheet & check File formatting:**

  The user should be able to upload an Excel sheet (.xlsx, .csv) through the system's interface. The system will validate the file format and structure to ensure it contains the required columns before processing. If the file is invalid, an appropriate error message should be displayed.

Proposed Solution Cont.

- **Parse, Read, and Sort Excel Data:**

  After the file is validated, the system will parse the data, extracting key fields like P Score, Z Score, and associated dimensions. It will then sort the data in descending order by P Score, and for ties, by Z Score, ensuring that the most relevant data is prioritized.

- **Identify and Map Dimensions to Higher Categories:**

  The system will identify the highest occurring dimension based on Z Score and map it to a higher-level category, such as mapping "Anger" to "Sadness," using predefined relationships stored in a reference database.

- **Generate and View Graphic Output:**

  Once the highest category is identified, the system will generate a graphical representation, which will be displayed to the user. The graphic will include puzzle-like segmentation and labels, allowing the user to view the output in an interactive format.

Project Assumptions

The proposed solution is based on following key assumptions:

- We are assuming that the data extracted from the uploaded Excel sheet will not be stored in the backend; it will be session-based and only accessible for the duration of the user session.
- It is assumed that the system will only support .xlsx and .csv file formats for uploading and any other formats will not be accepted by the system.
- We are assuming that the uploaded Excel file must contain specific required columns (P Score, Z Score, and associated dimensions).

Tech Stacks

Frontend

Backend

Proposed Team Structure & Roles

Role	Capability
Project Manager / Business Analyst	Lead and manage the overall engagement and work closely with the product owner to capture/ refine Requirements as user stories
Full Stack Developer	Develop and optimize the user interface for dashboard management, content approvals, and analytics visualization.
QA Engineer	Write test cases based on acceptance criteria of user stories and perform verification testing

Techverx

Let's delve deeper into the specifics

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Communication Tools

Management

We use Jira as a Project Management Tool.

Documentation

All project documentation is handled on SharePoint Site.

We employee cutting-edge tools for seamless communication and lean documentation,
fostering collaboration & efficiency.

Code Repo

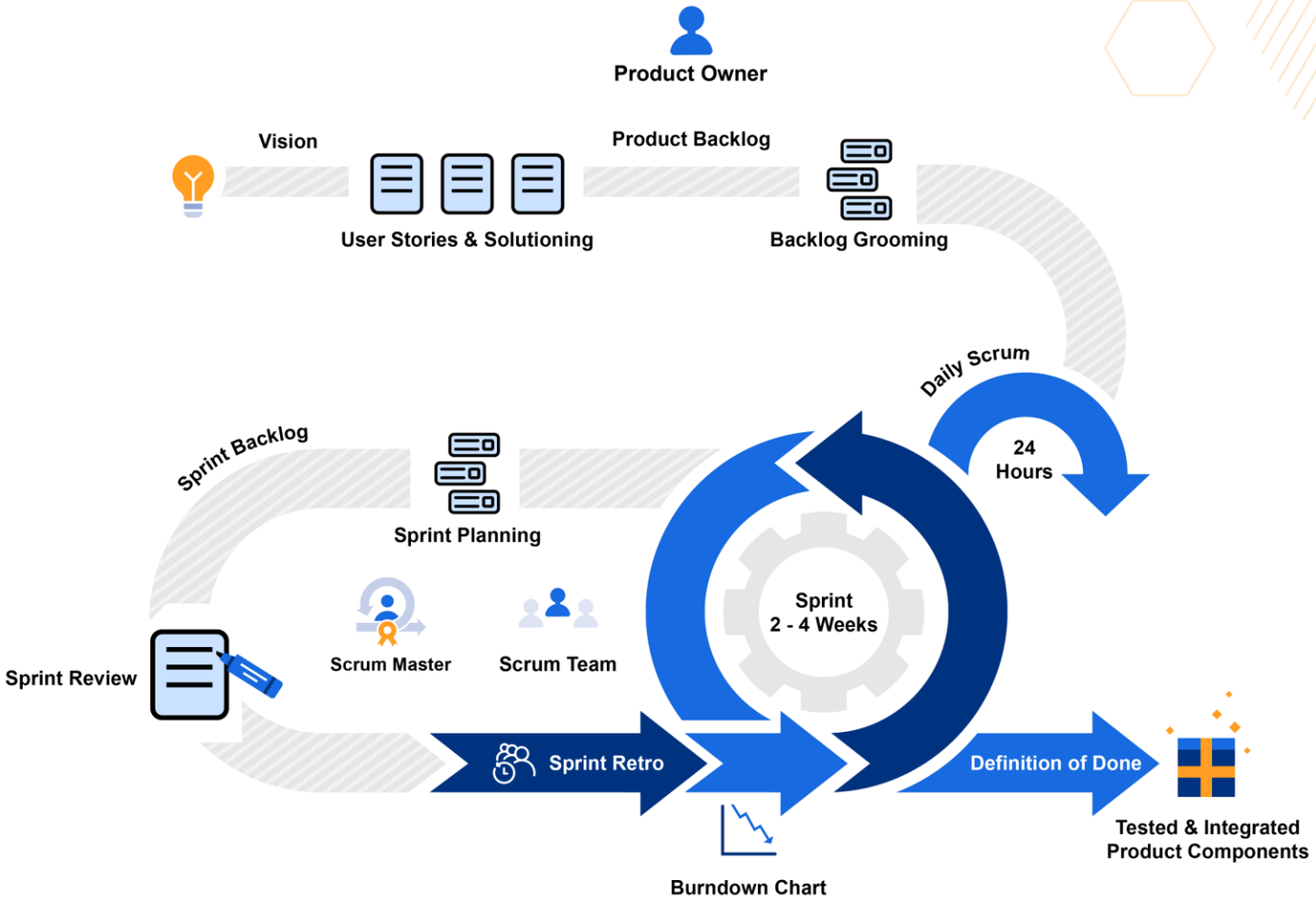
We use GitHub, GitLab & BitBucket for Code Repositories.

Communication

For Project Communication we use Slack, Teams & Zoom.

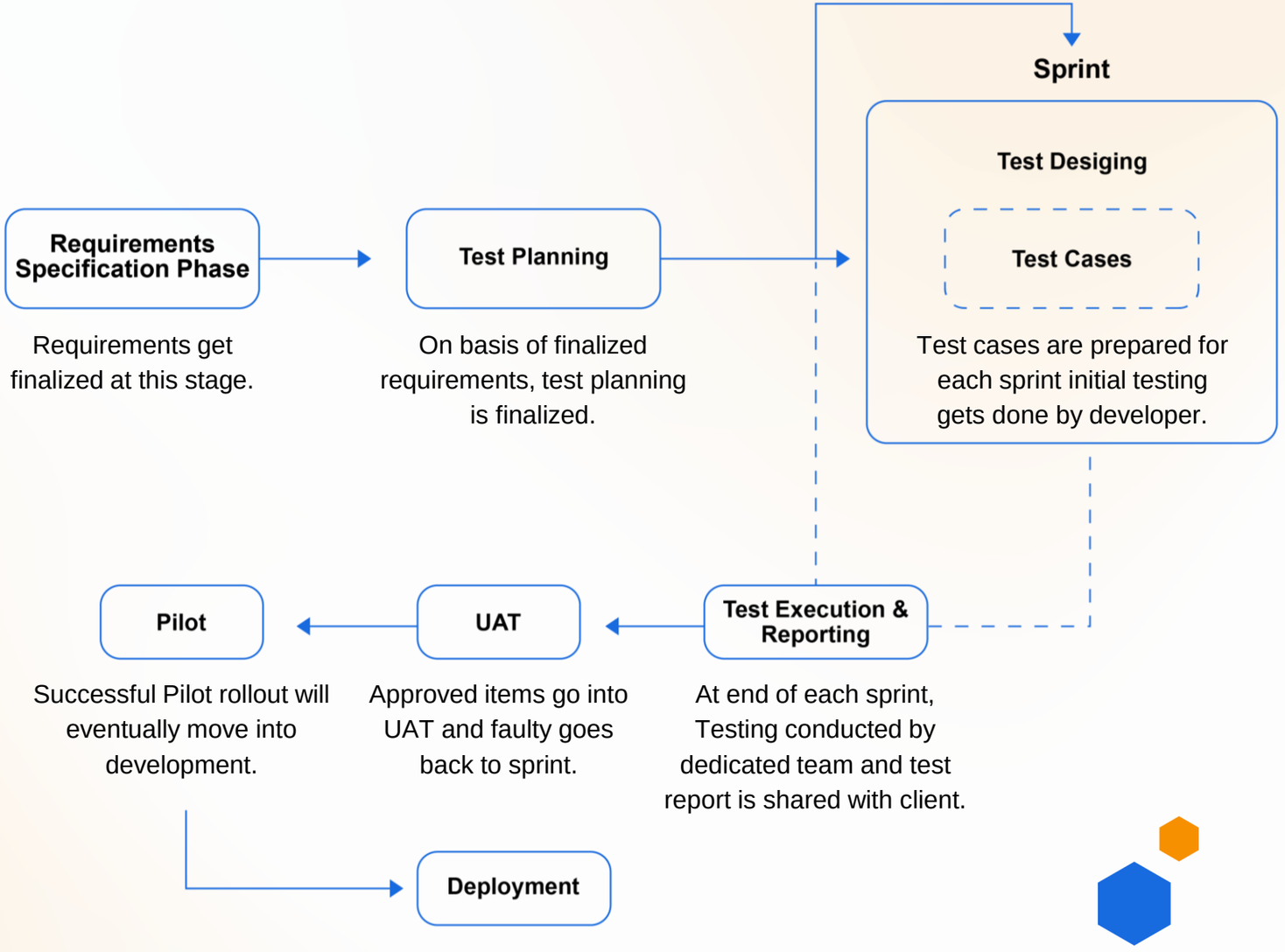
Agile Scrum Process

- We use the agile scrum methodology for project delivery to effectively take change requests and respond flexibly to new requirements that come through the undergoing project.
- It allows stakeholders to cater to the individual customer requirements, weigh them by cost/benefit, then analyze in detail, design, develop and test.

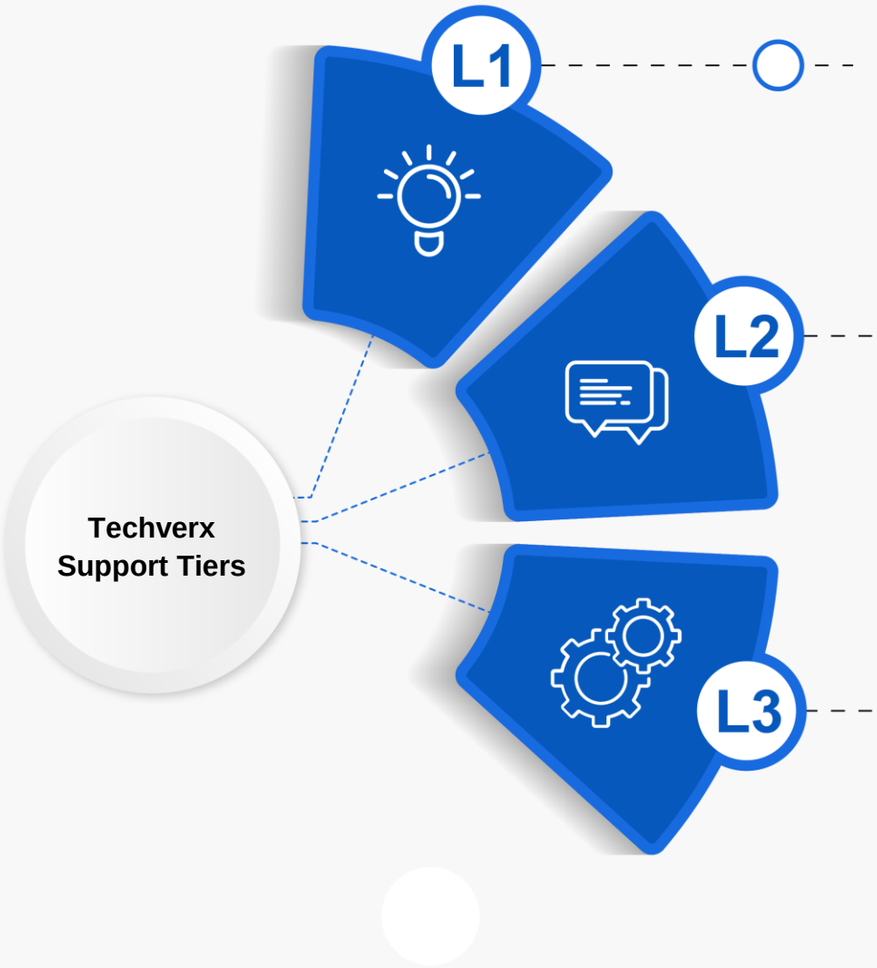


QA / Testing Process

1. **Unit Testing**
2. **Integration Testing**
3. **Acceptance Testing**
4. **Performance Testing**
5. **Security Testing**
6. **Automated Testing**
7. **Usability & Compatibility Testing**



Multi – Tier Support

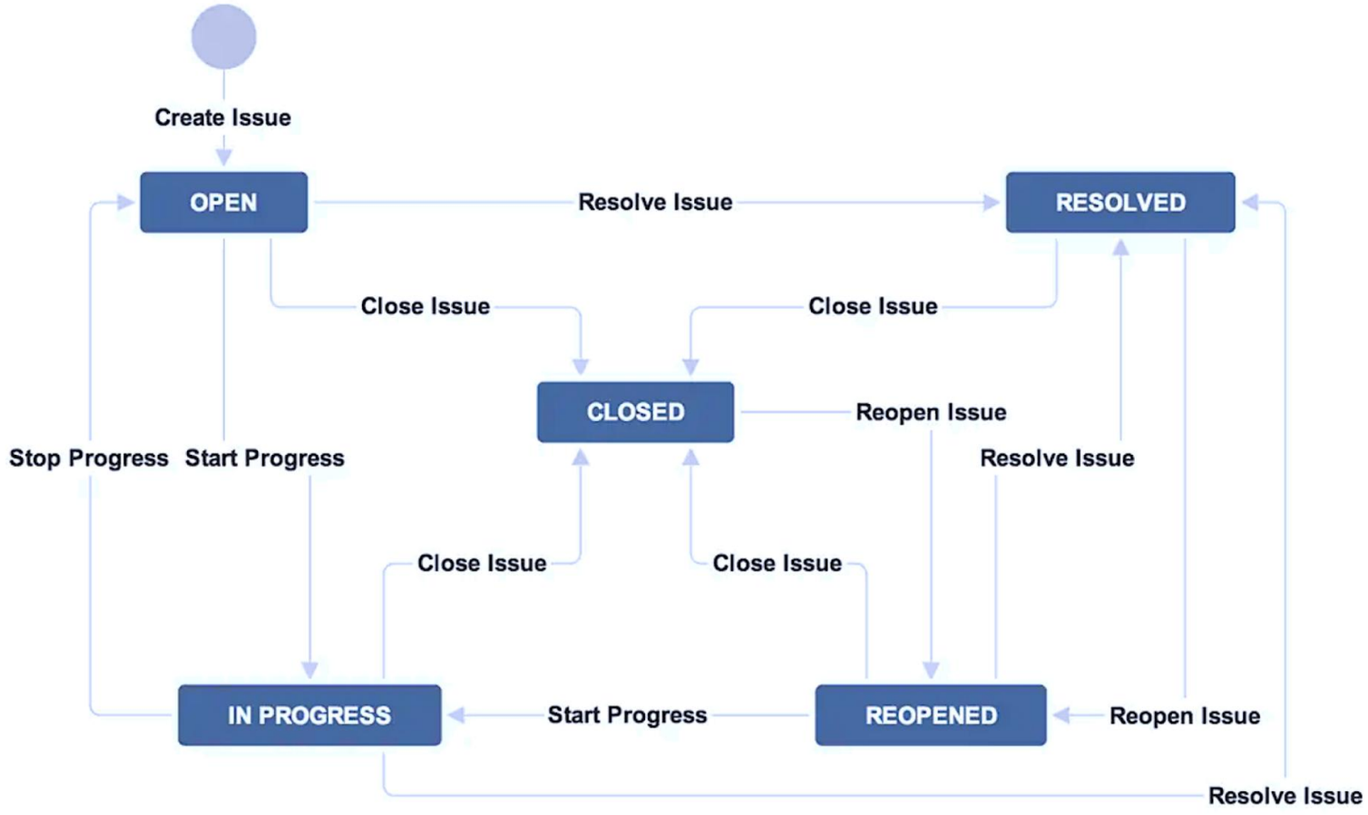


It is the initial level of maintenance provided by the user help desk. They help to screen the issues and assign to appropriate party/owner.

It deals with support tickets that can be resolve by doing basic configuration in the application or suggesting workarounds.

It deals with tickets requiring code changes.

L3 Support Process



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