Application Engineering – AppScribe
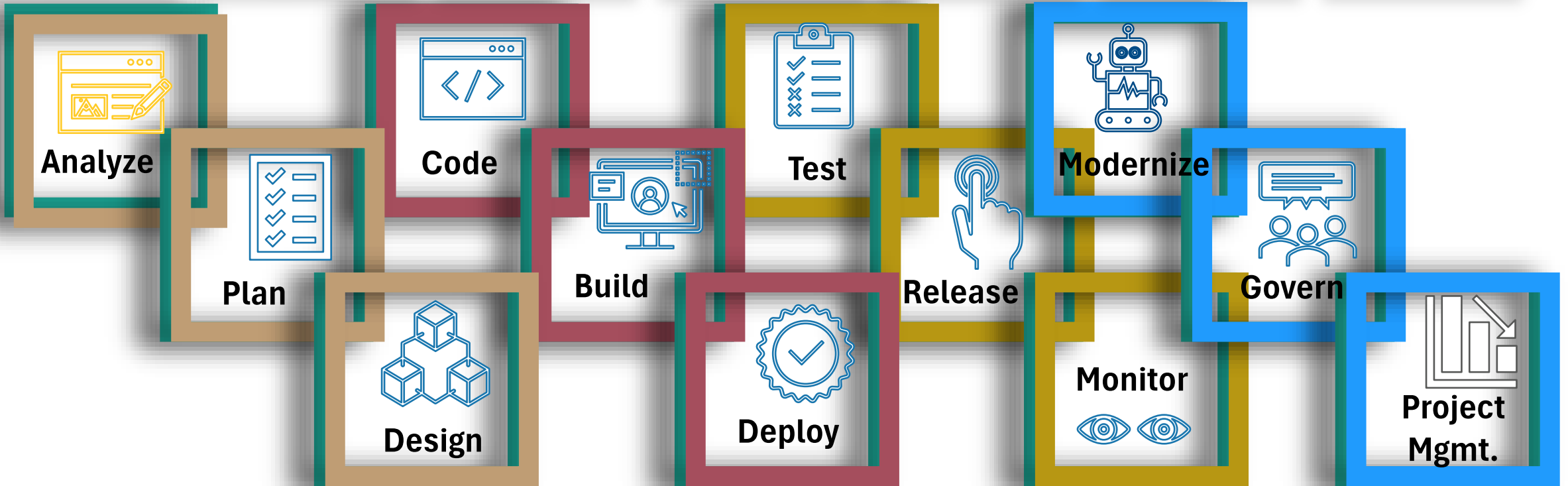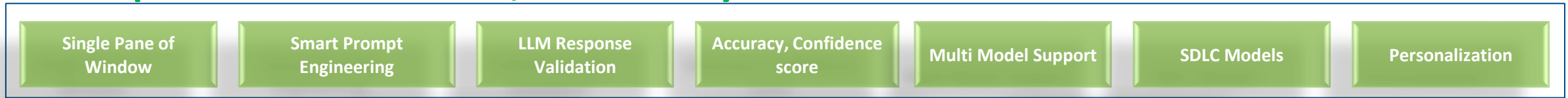
September 2024
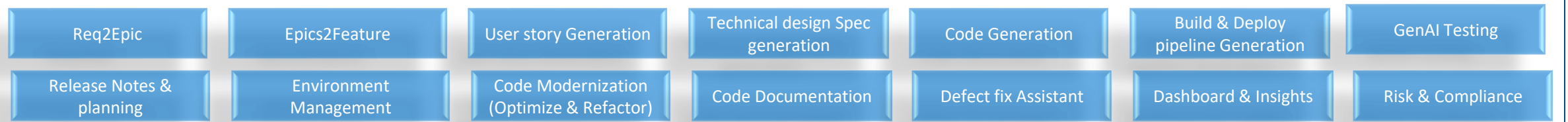
AppScribe for Acceleration, Automation, Orchestration across SDLC

Concept to value realization, Powered by GenAI

| Single Pane of Window | Smart Prompt Engineering | LLM Response Validation | Accuracy, Confidence score | Multi Model Support | SDLC Models | Personalization |

Analyze
Plan
Code
Design
Build
Test
Deploy
Release
Modernize
Monitor
Govern
Project Mgmt.

.... Use cases across SDLC phases

| Req2Epic | Epics2Feature | User story Generation | Technical design Spec generation | Code Generation | Build & Deploy pipeline Generation | GenAI Testing |
| Release Notes & planning | Environment Management | Code Modernization (Optimize & Refactor) | Code Documentation | Defect fix Assistant | Dashboard & Insights | Risk & Compliance |

Overview of AppScribe

What is AppScribe?

AppScribe is the **Gen AI Platform** for entire **SDLC Acceleration**, Automation and **Orchestration**.
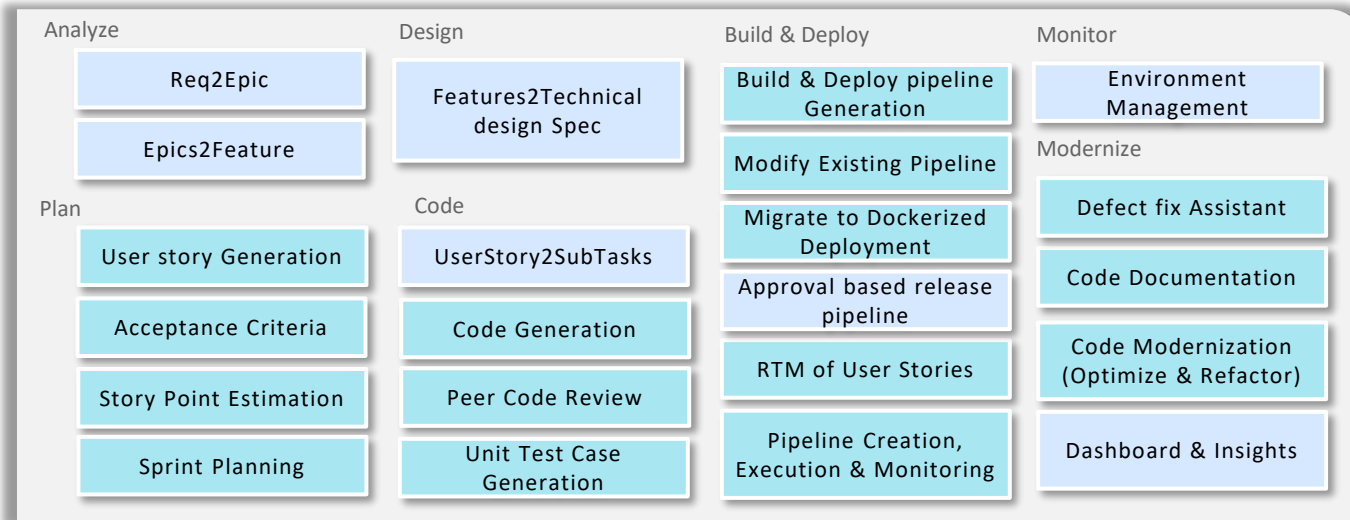
Who are the Target Personas?

- Scrum Masters
- Developers
- Dev Ops Engineers
- Support Engineers (L3 / L4)
- Project Managers

Key Features

- SDLC in a **Single Pane of Window**
- **Inbuilt Smart Prompt** Engineering
- **Multi Model** Support
- **Persona** Based Approach
- SDLC Tools Bi-Directional Integration
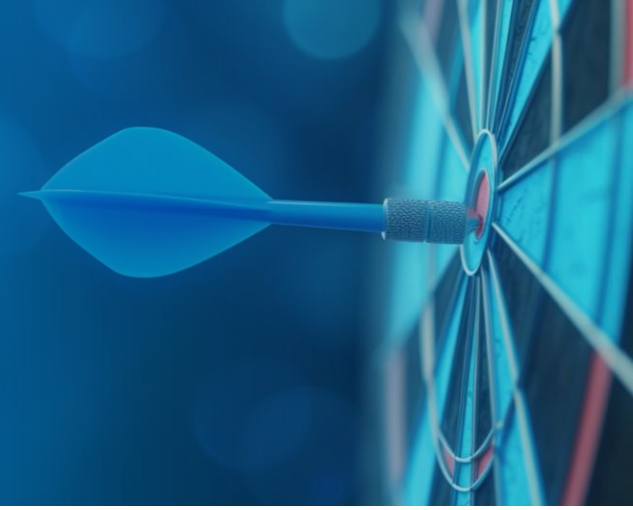- **Human Augmented Design**

Key Use Cases across SDLC Phases . . .

Analyze
- Req2Epic
- Epics2Feature

Plan
- User story Generation
- Acceptance Criteria
- Story Point Estimation
- Sprint Planning

Design
- Features2Technical design Spec

Code
- UserStory2SubTasks
- Code Generation
- Peer Code Review
- Unit Test Case Generation

Build & Deploy
- Build & Deploy pipeline Generation
- Modify Existing Pipeline
- Migrate to Dockerized Deployment
- Approval based release pipeline
- RTM of User Stories
- Pipeline Creation, Execution & Monitoring

Monitor
- Environment Management

Modernize
- Defect fix Assistant
- Code Documentation
- Code Modernization (Optimize & Refactor)
- Dashboard & Insights

✓ AppScribe currently supports only **Custom Applications Development like React, Angular, Java, .Net**

✓ **Limited Applicability for Legacy** technologies like COBOL, AS400, AEM etc.,

✓ Tools Integrated – **JIRA, Azure Boards, Jenkins, Azure DevOps.**

✓ Generic **Prompts** may need **customization** for Client specific frameworks and requirements

✓ **Up to ~30% velocity acceleration expected** for the overall applications / projects based on use cases applicability

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Ready to Use | Work in progress

LTIMindtree

Case in Point: Gen AI Assisted Forward Engineering
American Travel Technology company

Objective:

- The customer was modernizing their legacy applications to latest technology landscape

- As part of the modernization exercise the product specification documents were reverse engineered from the legacy code

- As per the modernization activity, the forward engineering of converting the product specifications into user stories to expedite the development process

Solution :

- Leverage AppScribe's Planning Module which leverages Generative AI to address SDLC related use cases

- Use Case: Requirements to User Stories Generation

- Gen AI Stack:

  - Google Vertex AI

  - LLM: Text-Bison

Expected Benefits:

Improved developer productivity & accelerate sprint planning by 30%

AppScribe Infra Requirements for POC / Single Project
Infra Requirements

Requirements Container Based Deployment

- **Bare Minimum POD** / Cluster with managed MongoDB services
- **Autoscaling** should be enabled based upon the usage
- GenAI cloud subscriptions – Azure Open AI GPT 3.5 / Google vertex AI

OR

Requirements VM Based Deployment

- 1 Linux server, 1 Windows server
- GenAI cloud subscriptions – Azure Open AI GPT 3.5 / Google vertex AI

Requirement	Azure Container Description
AppScribe Image	Bare Minimum POD with managed Mongo DB service and autoscaling enabled
Gen AI Cloud Subscription	**Azure Open AI** - GPT 3.5 Turbo 16K Model / **Google Vertex AI** – Code / text Bison / Gemini pro

Requirement	Azure Server Description
AppScribe Hosting Server 1	1 E8as v4 (**8 vCPUs, 64 GB RAM**) (1 year reserved), Linux, (Pay as you go); 1 managed disk – S20; Inter Region transfer type
AppScribe Hosting Server 2	1 E4as v5 (**4 vCPUs, 32 GB RAM**) (1 year reserved), Windows, (Pay as you go); 1 managed disk – E40 (**512 GB HDD**); Inter Region transfer type
Gen AI Cloud Subscription	**Azure Open AI** - GPT 3.5 Turbo 16K Model / **Google Vertex AI** – Code / text Bison / Gemini pro

*Gen AI Cloud Subscription cost will be based on usage