

**Tecnotree**

**QMS Induction**

**Quality Management System**

**For**

**New Joiners**

Version:1.3  
07-Sep-2022  
Company Internal



# Content

- ✓ ISO 9001:2015 Certified Quality Management System Since May 1994
- ✓ Locations – India, Finland & LATAM
- ✓ Recent External audits with Zero “major” Non conformances – **Finland**: May-22, **India** : Aug-22
- ✓ **Embedded** level of maturity
- ✓ Our Vision and Quality Policy
- ✓ TECNOTREE Way of Working Practices
- ✓ Built-In-Quality (BIQ)
- ✓ Tools in Use



# ISO 9001:2015 Maturity Framework

**Necessary Evil (External Requirement):** Only interested in getting and keeping certification as a tender requirement. The management system is not culturally important or a key leadership topic.

**Grass Roots (Operationally Supported):** A step beyond necessary evil - individual contact may be interested in additional benefits from management systems. However, they are really still trying to understand and senior management not supportive, typically budget constrained. Not culturally important or key leadership topic.

**Embraced (Organizationally Embraced):** Management systems more important to the business and used to improve the organization – “we understand it” – but it is not fully embedded in the organizational culture. Likely to have some interest to senior management, but not a top priority.

**Embedded (Organizationally Embedded):** Management systems seen as central to business and they are embedded as part of the organization’s culture – “we believe in it”. Key leadership focus.

Disclaimer: BSI did business with 80,000 clients in the last 12 months across 172 countries and with over 200,000 clients in the last 6 years – all of the learnings from those client interactions were incorporated into the Excellence Framework



# QMS Vision and Quality Policy

## WHO WE ARE

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Tecnotree is the only full-stack digital BSS provider with over 40 years of deep domain knowledge, proven delivery and transformation capability across the globe

## VISION

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*“Our vision is an online world where digital marketplaces offer personalized bundles of aggregated content, products, and services”.*

## MISSION

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*“Our mission is to help communications service providers to transform their business towards a marketplace of digital services”.*



# QMS Vision and Quality Policy

## Quality Policy Statement

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The Management and Staff of Tecnotree make a personal commitment to maximize customer satisfaction by establishing a robust quality management system.

### **Objectives of Quality Management System are:**

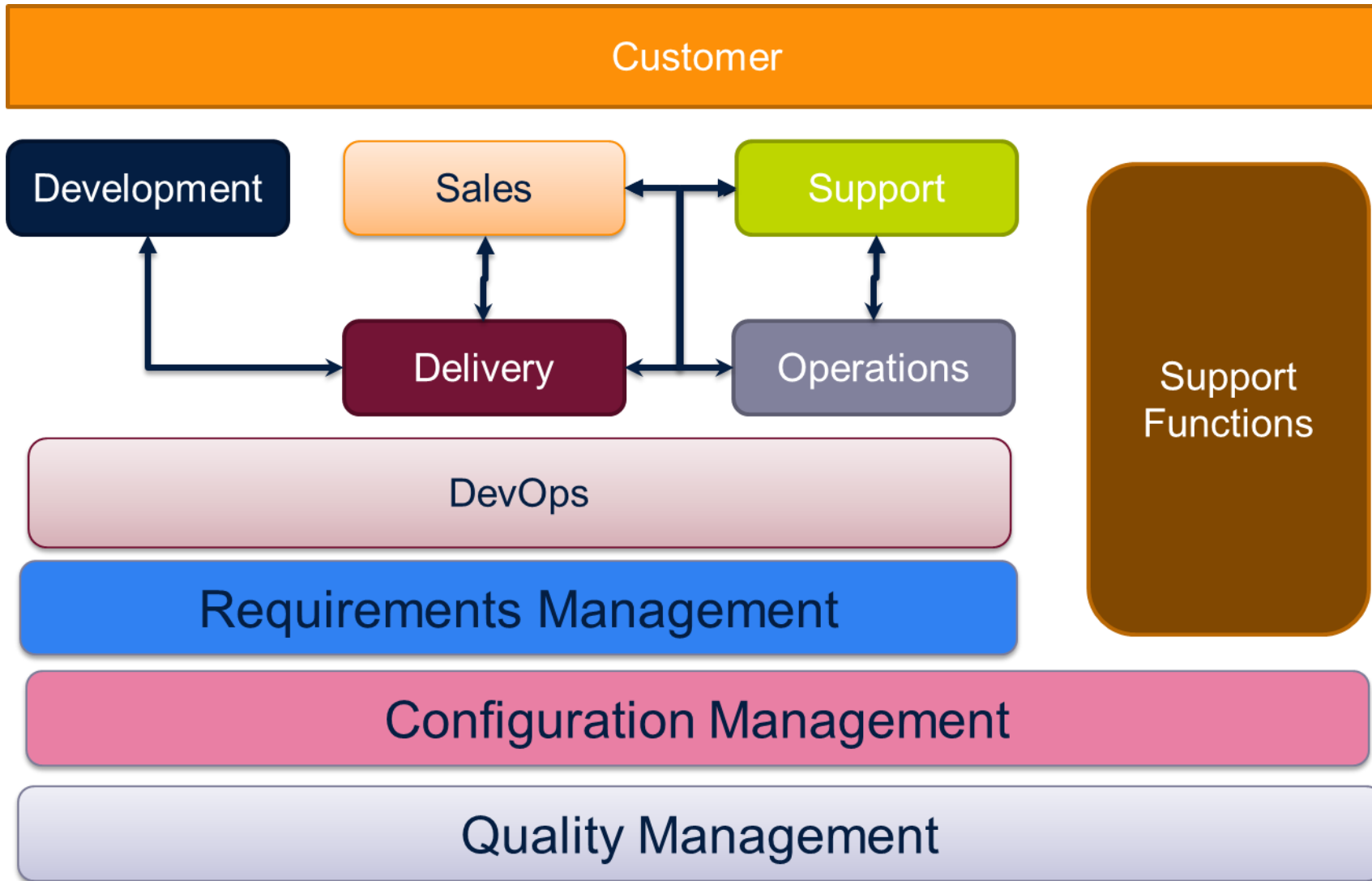
- ✓ ADAPTIVE and AGILE to evolving business environment
- ✓ FUTURISTIC and INNOVATIVE in developing products and services
- ✓ PASSIONATE about DELIVERING superior customer experience
- ✓ COLLABORATIVE and RESPECTFUL to all employees and partners

Everyone is responsible for making this Quality Policy a reality at Tecnotree. Management and Staff commit to compliance to the Quality Management System.

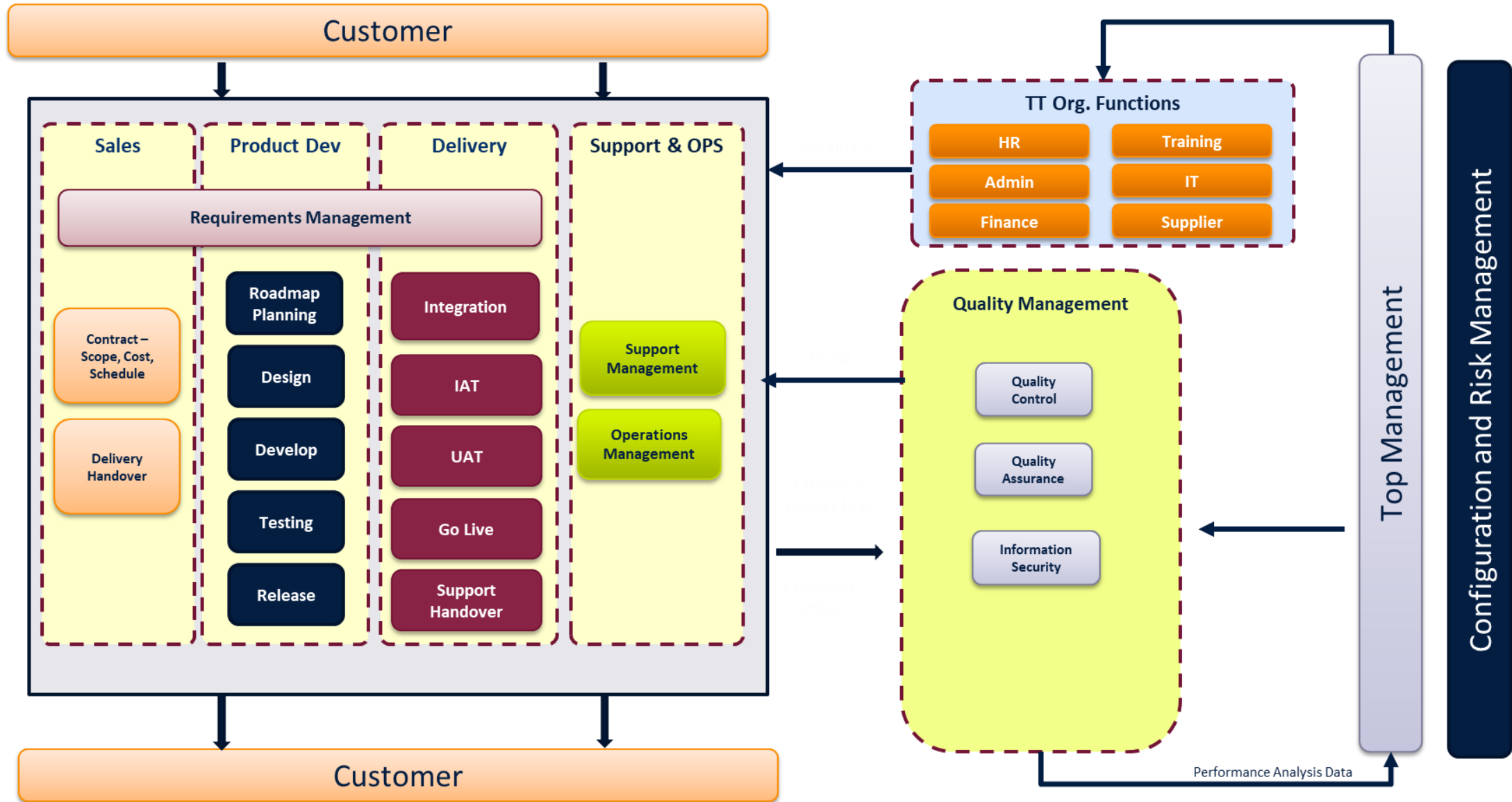


# Organization Structure & Way of Working

# TECNOTREE Way of Working Practices

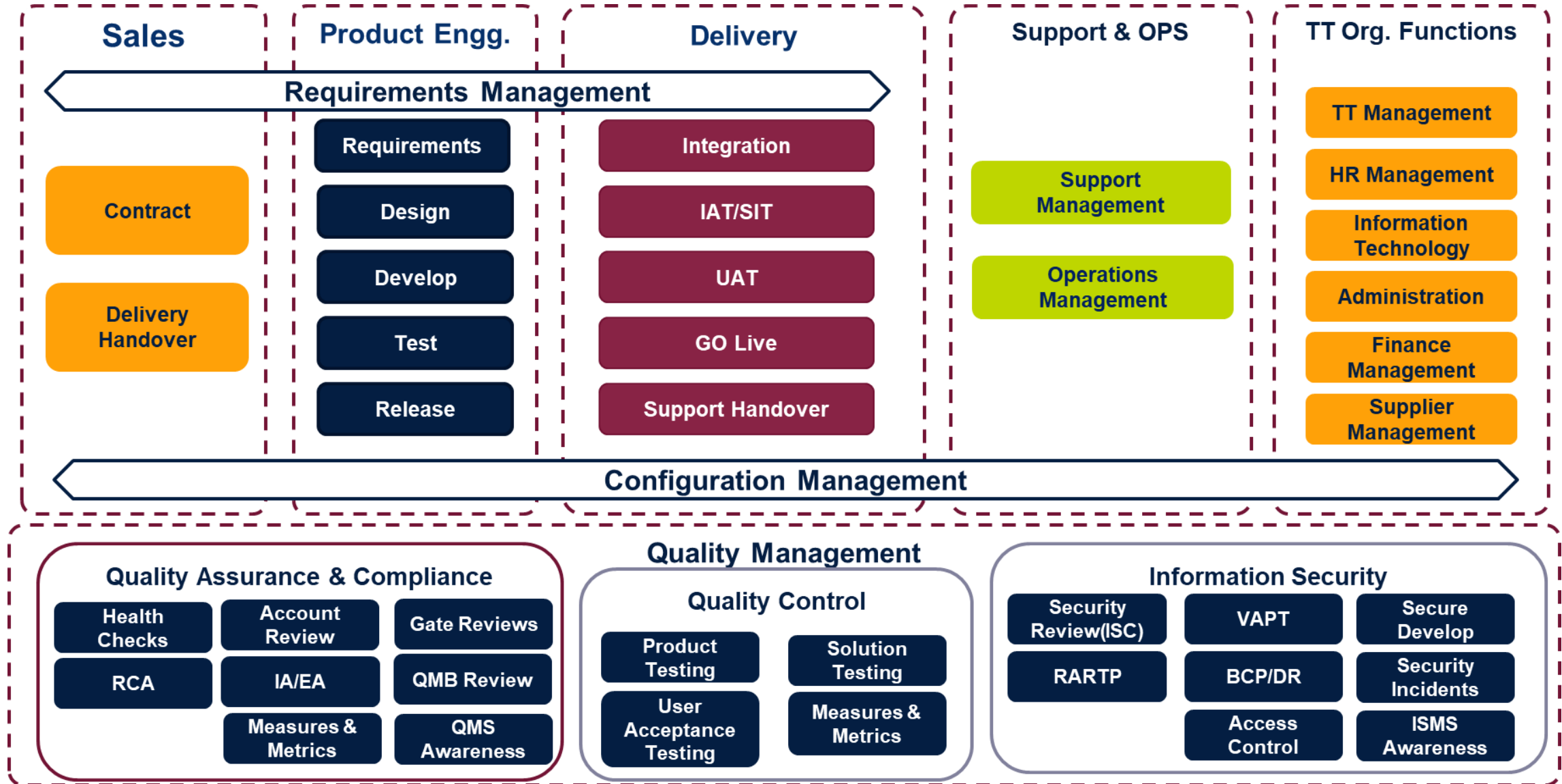


# Integrated Quality Management System

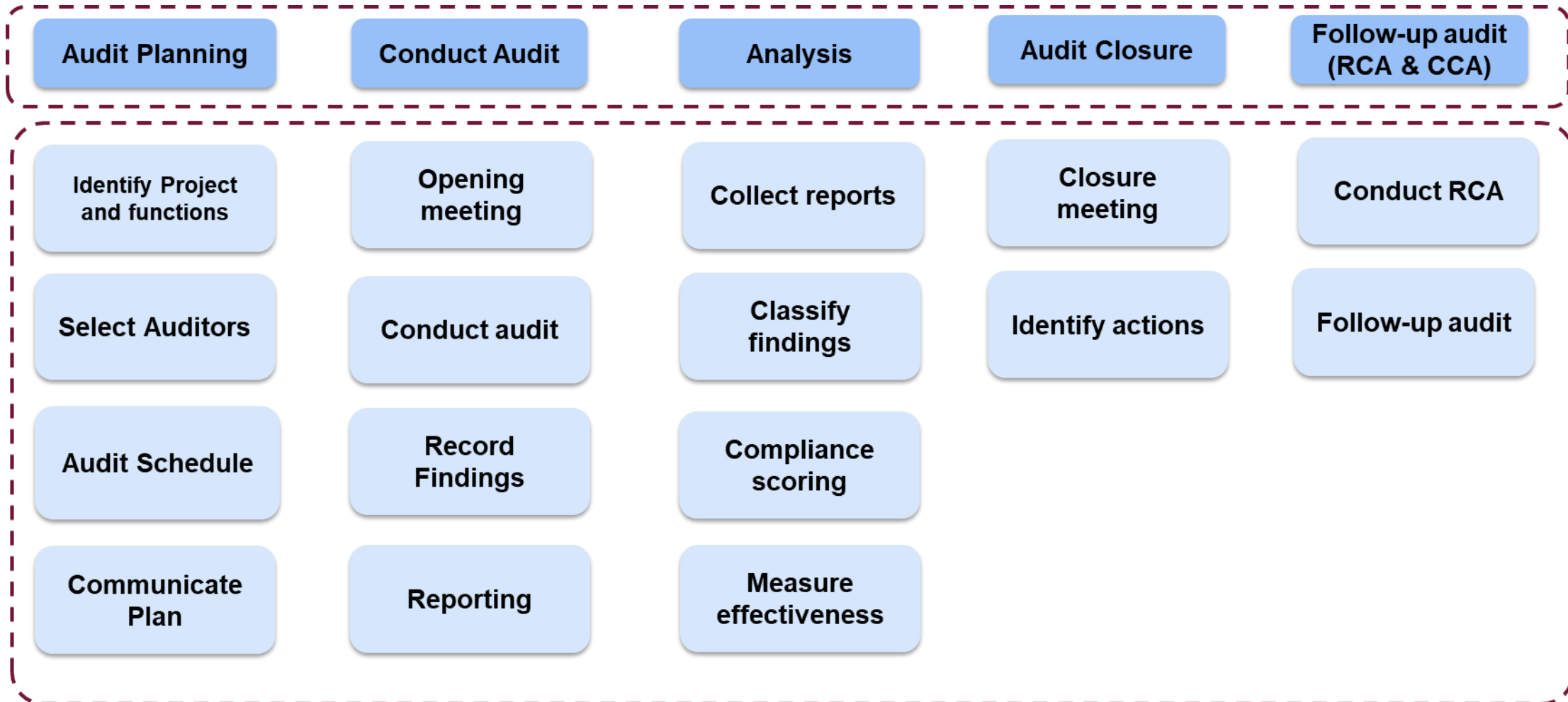




# Quality Management System Practice



# Quality Management System – EA & IA Activities



# Presales & Sales Management Practice

## Sales Governance

Risk Management

Commitment Management

Profitability Management

Forecasting

Partner Management

## Prospect Management

Lead Generation

Prospect Selection

Value Creation

## Bid Management

### Analyze

Feasibility Study

Bid Plan

Offer Screening

### Prepare

Scoping

Scheduling

Budgeting

Bid Review

### Negotiate

Technical

Legal

Commercial

Commitment Review

## Transition

Delivery Handover

Operations Handover

Training Handover

## Account Management

Target Setting

Value Creation

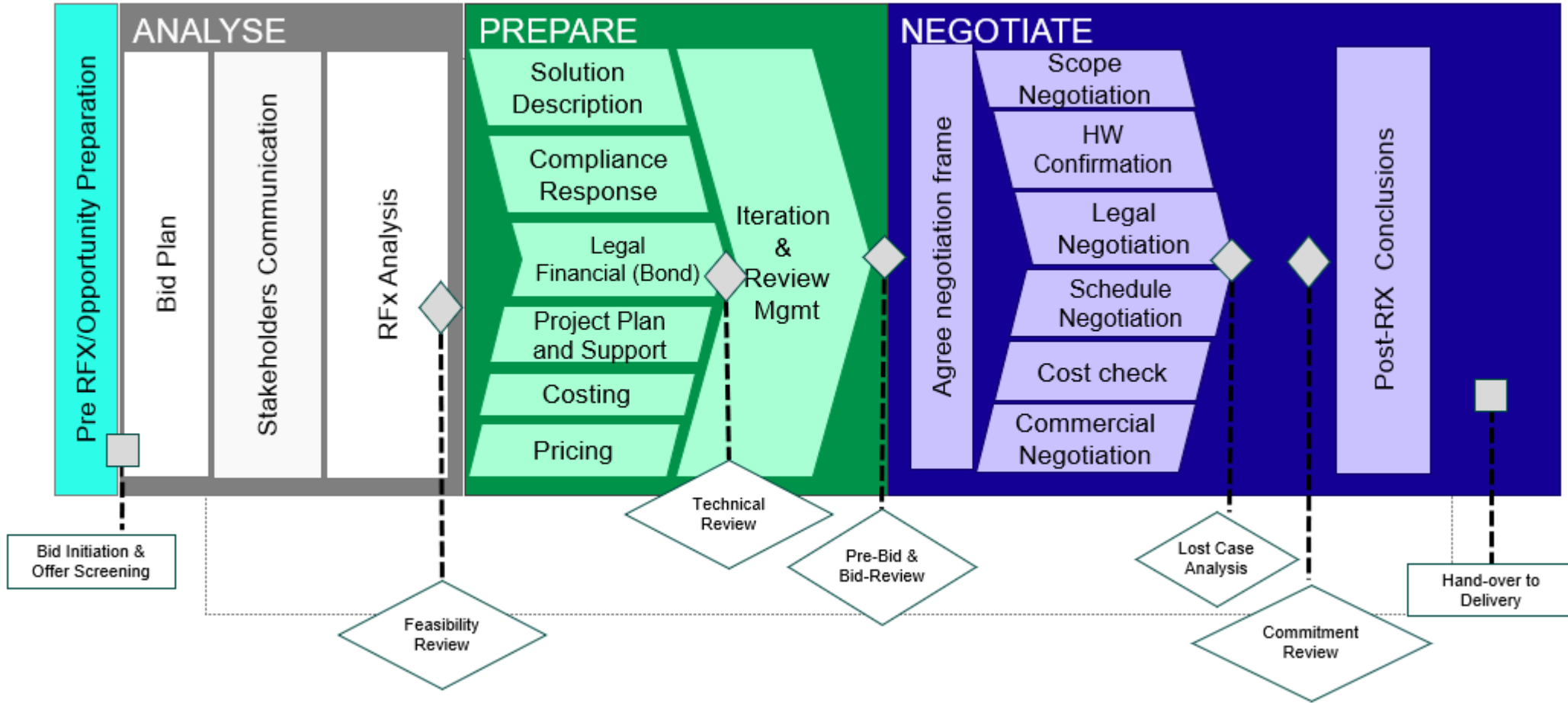
Escalation Management

Invoicing & Collections

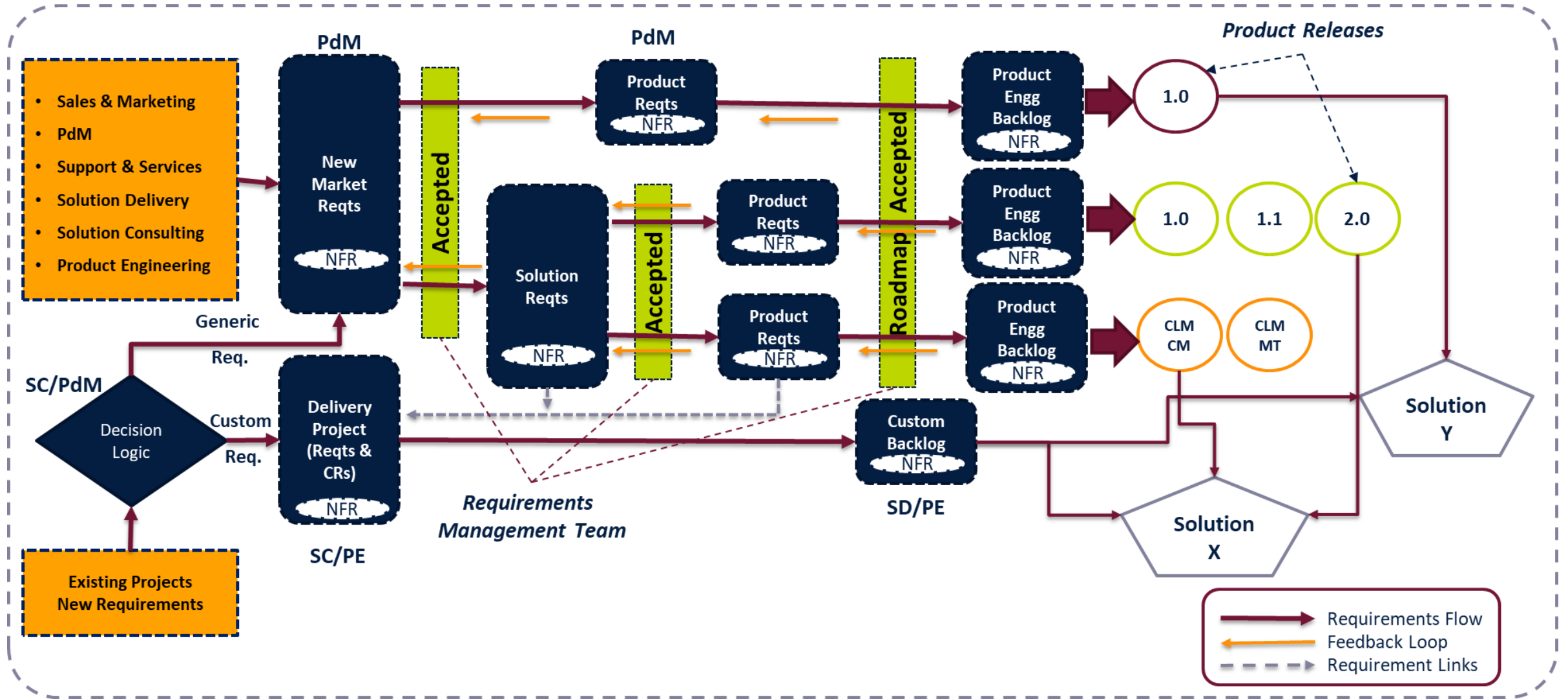
Customer Satisfaction



# BID Management Process

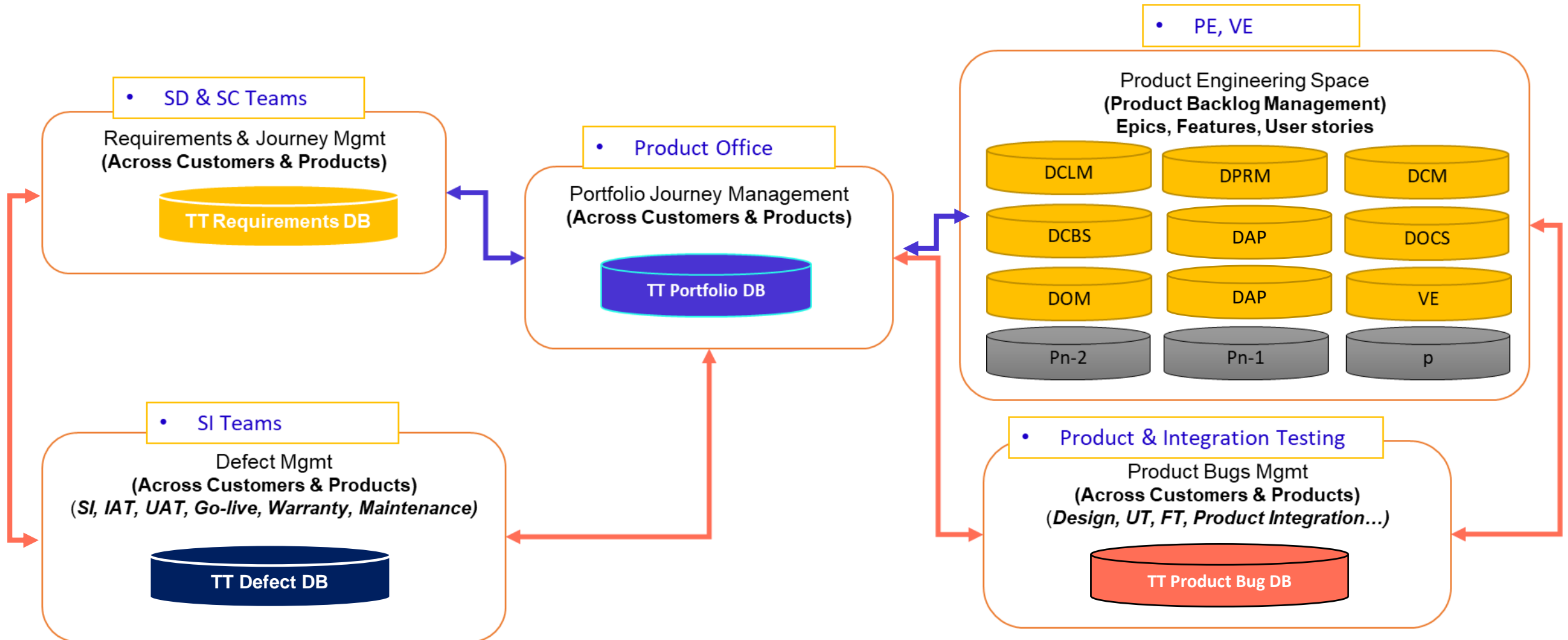


# Requirements Management Practice



# Requirements Management Practice

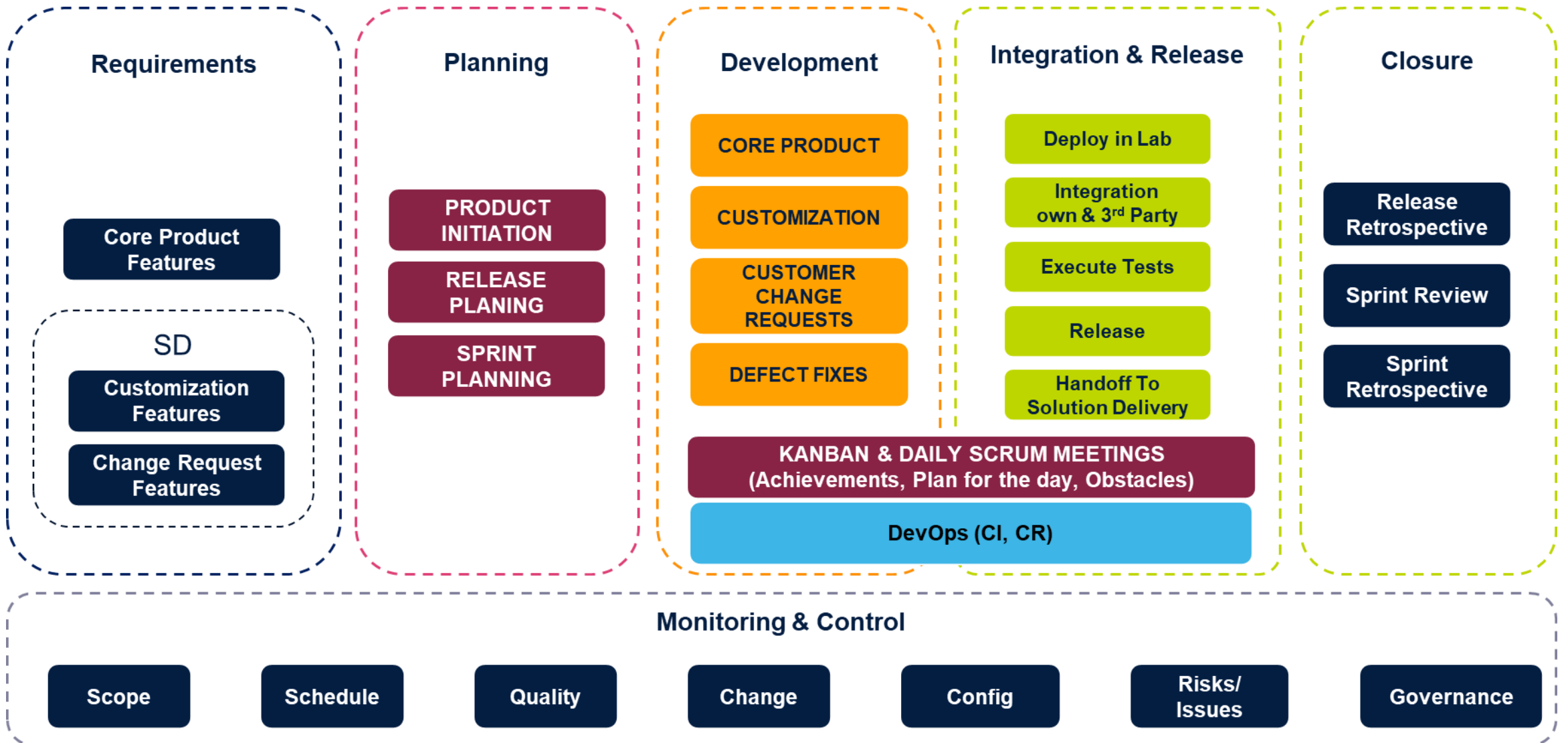
Customer Requirements ↔ Customer Specific Journeys ↔ Portfolio Journeys ↔ Product Features ↔ User Stories



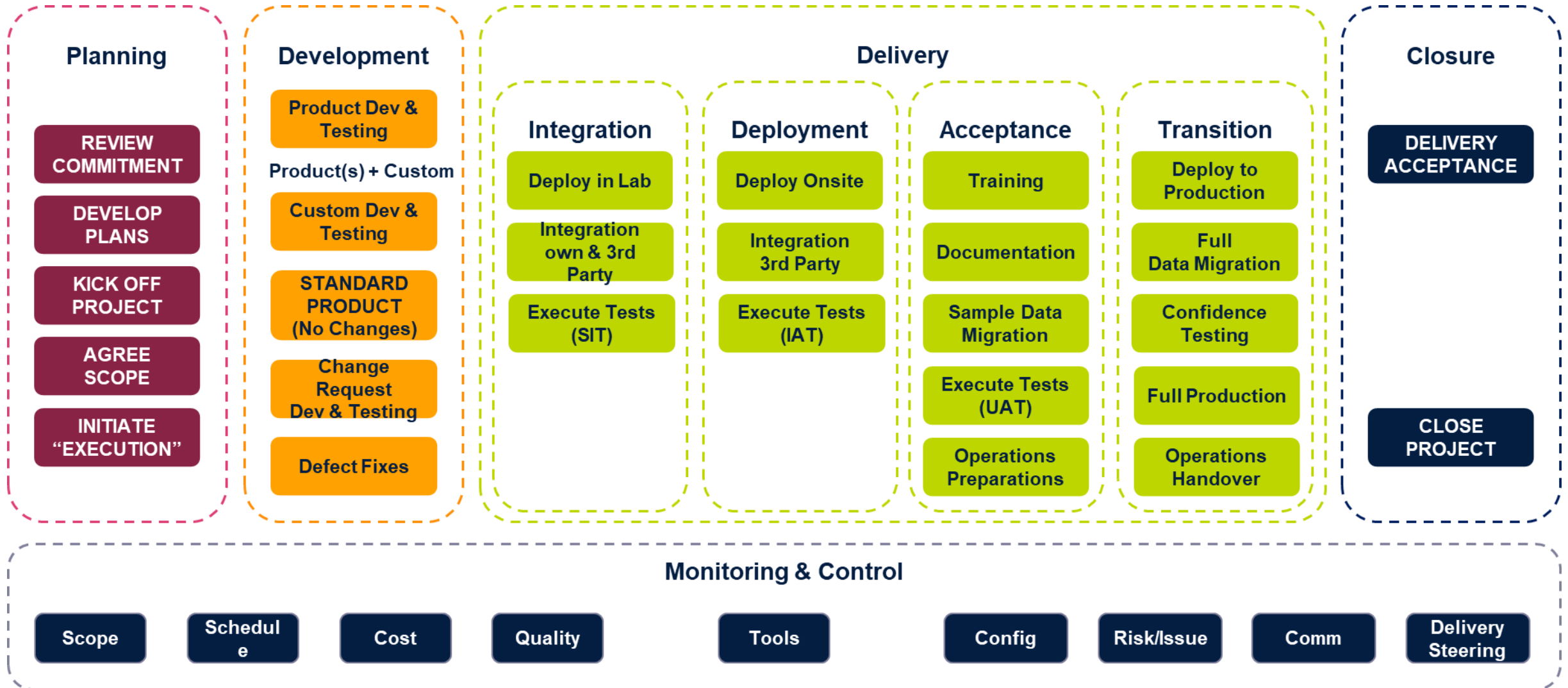
**ENABLES MEASUREMENT - TRACKING - VERIFICATION - CERTIFICATION**



# Product Engineering Practice



# Solution Delivery Practice





# Operations (MSO) Practice

## Transition

Change Control

Deployment Control

Configuration Control

Knowledge Transfer

Service Validation

## Operations & CSI

Event Mgmt

Incident Mgmt

Problem Mgmt

Request Fulfilment

Measurements & Reporting

Training & e-Learning

Automation

Business Process Assessment

Performance & Capacity Assessment

Security Process Assessment

Customer Experience Assessment

Campaign Mgmt Consultancy

## Engagement Management

Scope of Service

Cost

SLA Adherence

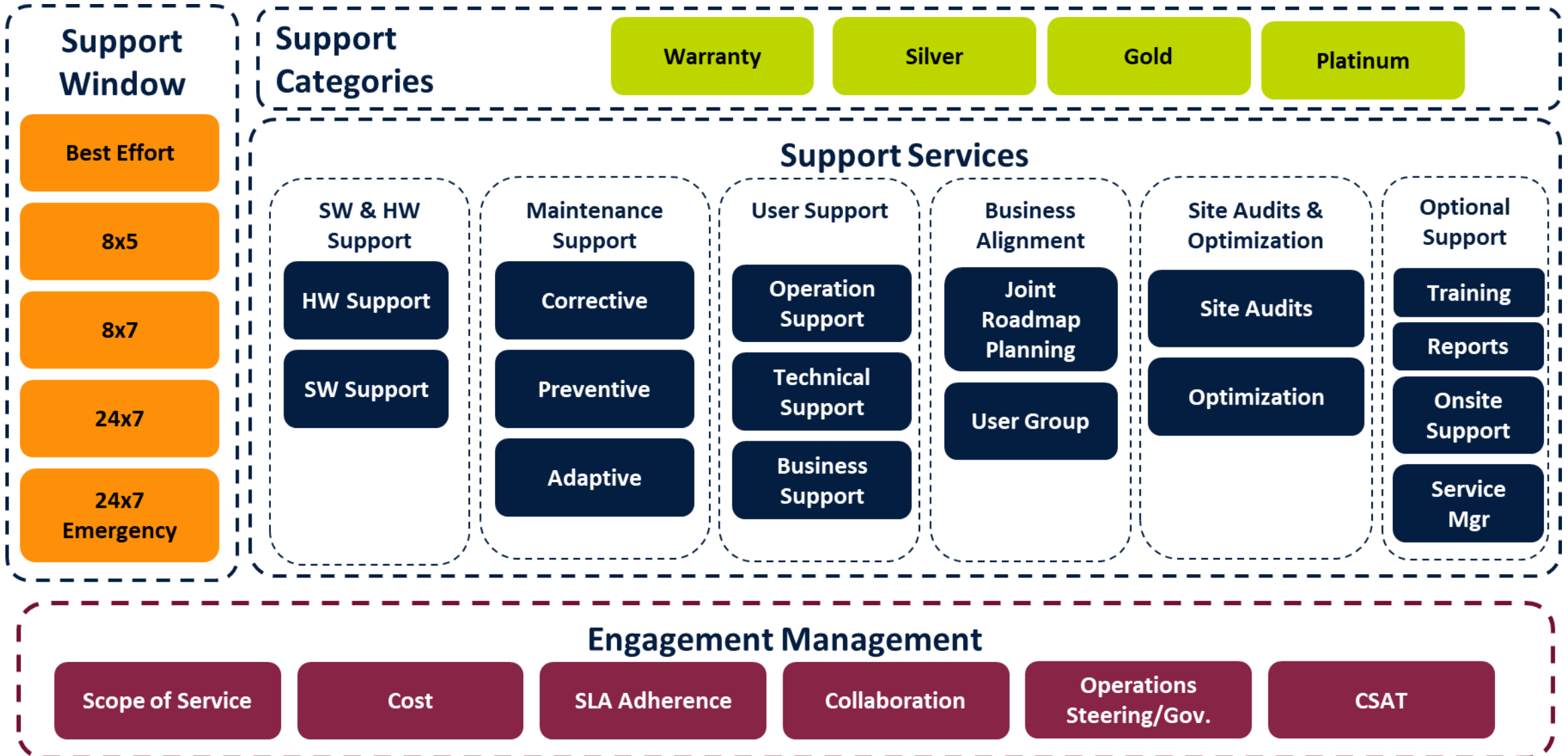
Collaboration

Operations Steering/Gov.

CSAT



# Support (AMC) Practice

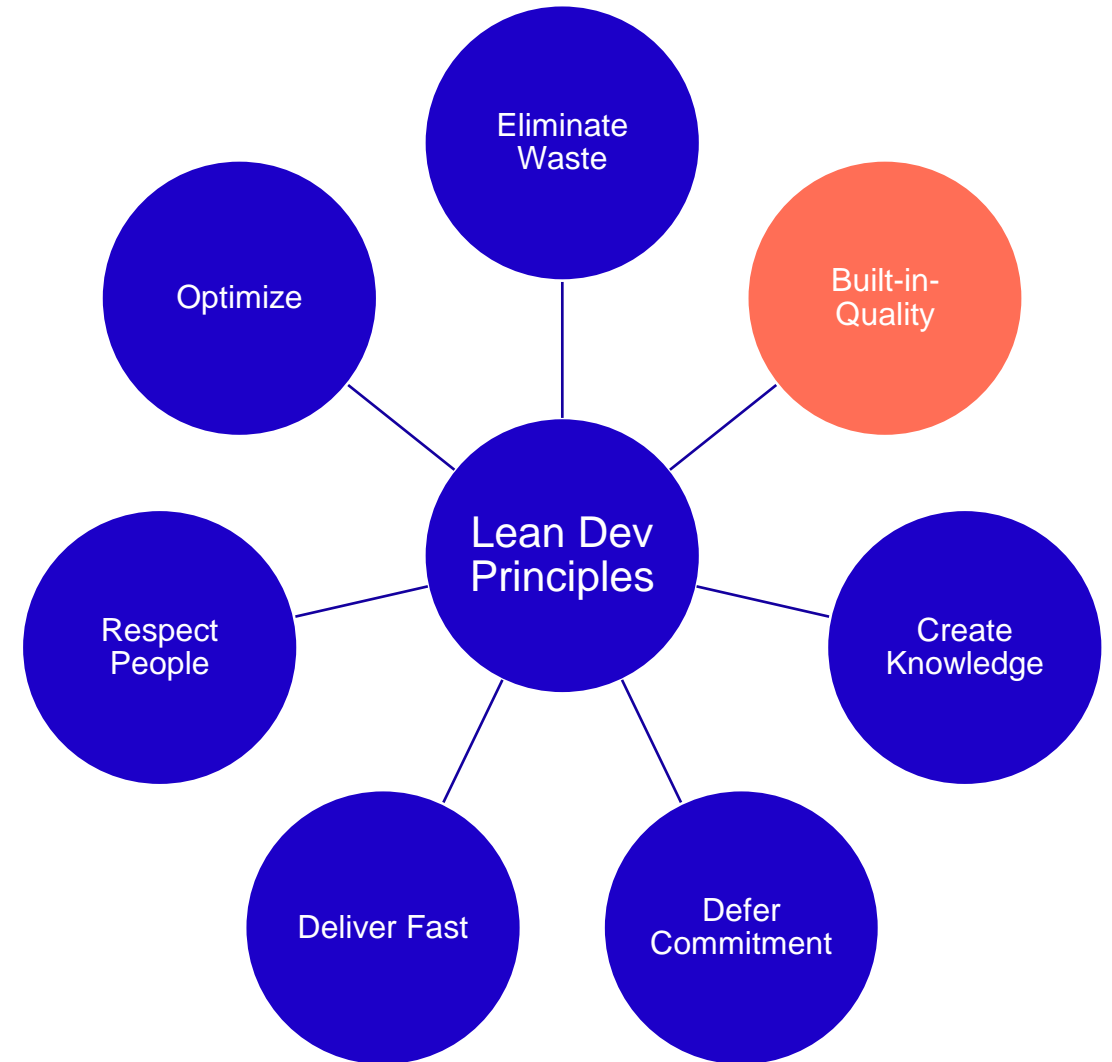


# Built-in Quality Framework

# Built-in Quality

***Built in Quality is one of the seven Lean development principles***

- ✓ Built-in quality is one of the SAFe Core Values as well as a principle of the Agile Manifesto, “Continuous attention to technical excellence and good design enhances agility”
- ✓ Built-in quality is also a core principle of the Lean-Agile Mindset, helping to avoid the cost of delays (CoDs) associated with recalls, rework, and fixing defects.
- ✓ Built-in quality philosophy applies systems thinking to optimize the whole system, ensuring a fast flow across the entire Value Stream, and makes quality everyone’s job.



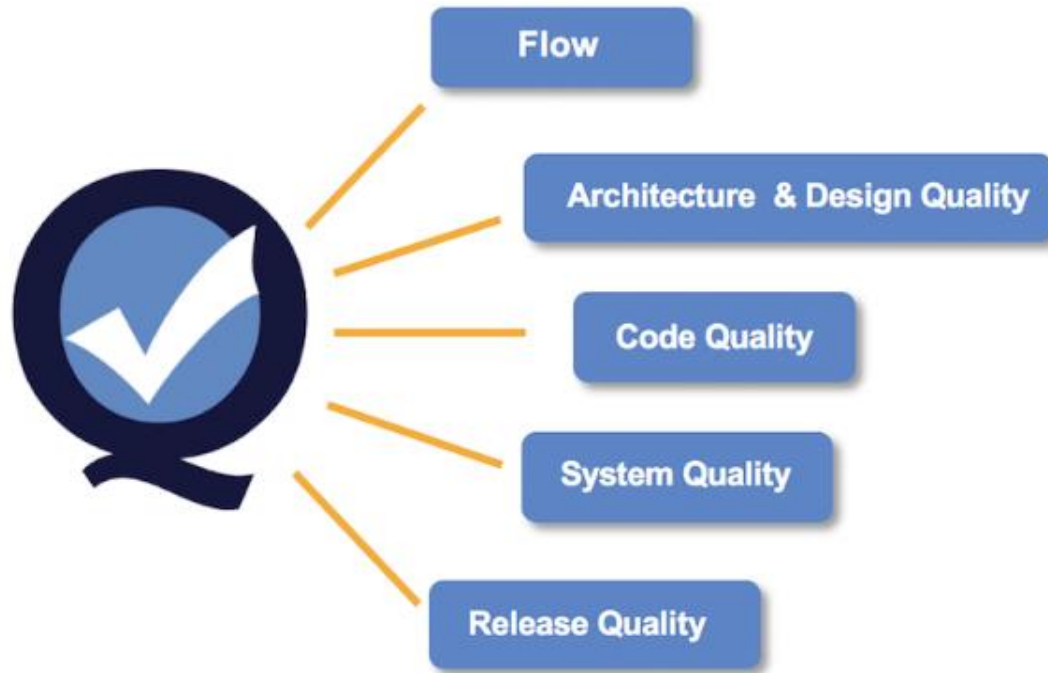
# Built-in Quality (BIQ) Principles

- ✓ Build Quality ***right at the source***. Enable the process to produce a defect-free product every time.
- ✓ ***Allow the process to be stopped*** when defects are identified in process
- ✓ ***Minimize wait states or reduce lead time*** with Reduce context switching, knowledge gaps, and lack of focus
- ✓ **Automation** of tedious, repeatable manual process
- ✓ ***Do NOT rely on Testing*** to catch defects. With Built-in Quality, should be able to eliminate inspection!

## Built-In-Quality (BIQ) Principles



# Built-in Quality (BIQ) Dimensions



© Scaled Agile, Inc

## ✓ **Flow:**

Continuous Delivery (CI/CD) represents the workflows, activities, and automation needed to release a new piece of functionality all the way from inception to release

## ✓ **Architecture & Design:**

Quality in architecture and design make future requirements easier to implement, easier to test, satisfy NFRs & add value to business

## ✓ **Code Quality:**

The speed and ease with which new feature and changes can be added to the existing functionalities

## ✓ **System Quality:**

System quality confirms that the systems work as expected, everyone is aligned on what changes to make and continuously integrate end to end solution

## ✓ **Release Quality:**

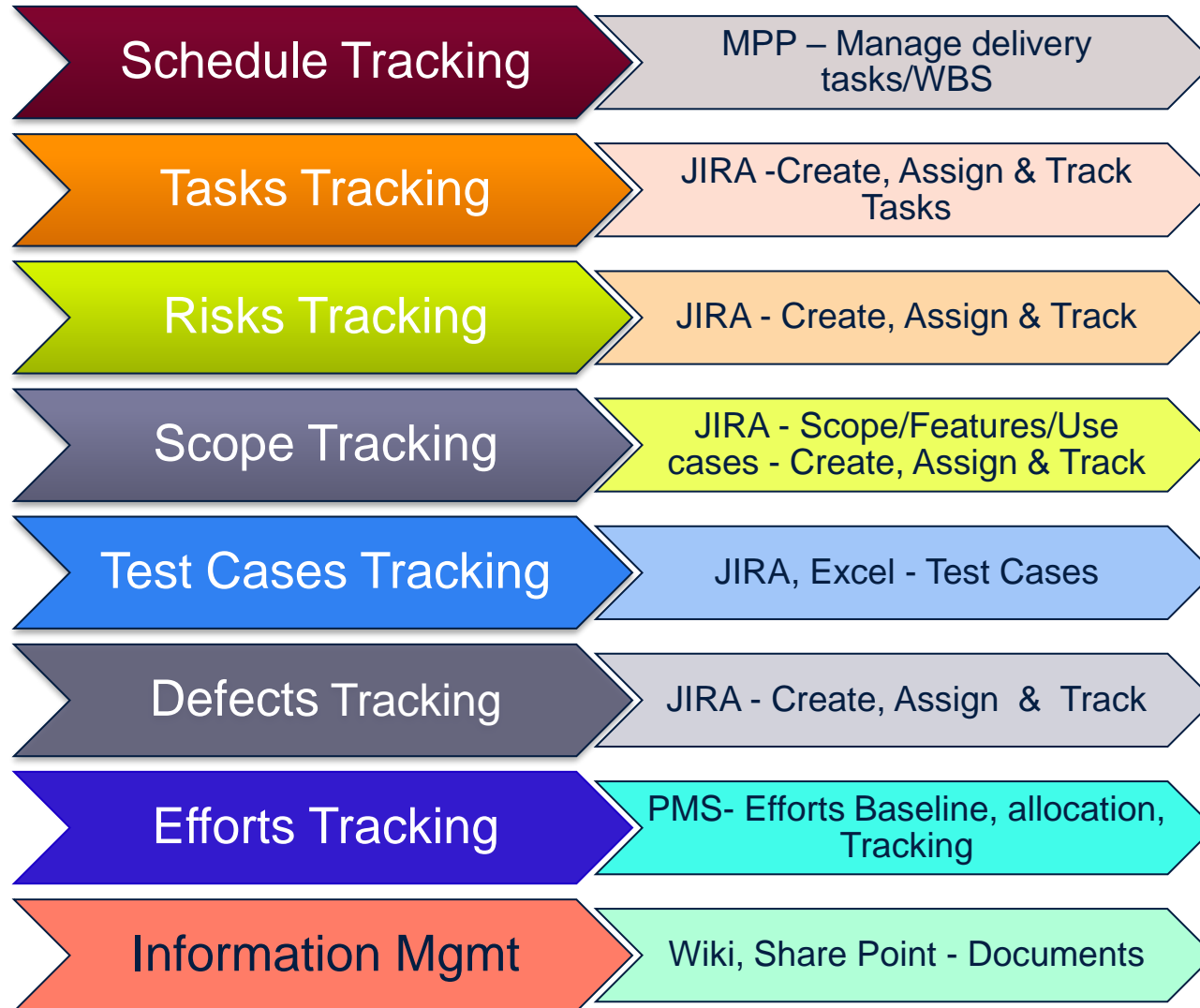
The faster releases, more frequent, less risky releases, with automated pipeline to ensure quality



# Built-in Quality (BIQ) Framework

	PRODUCT ENGINEERING		SOLUTION DELIVERY	
	Development/UT	Functional Test	SIT+IAT	UAT+ Production
	Team Increment	System Increment	Solution Increment	Production Increment
Objective	Defects don't leave the station	Defects don't leave the team	Defects don't leave the lab	Defects don't leave the plant
Goal	<ul style="list-style-type: none"> <li>Eliminate in-process repair</li> <li>Architecture &amp; code quality</li> </ul>	<ul style="list-style-type: none"> <li>Improve upstream quality</li> </ul>	<ul style="list-style-type: none"> <li>Minimize disruption to downstream process</li> </ul>	<ul style="list-style-type: none"> <li>Protect customer from 'obvious defect'</li> </ul>
DoD	<ul style="list-style-type: none"> <li>User Stories adhere to Architecture principles</li> <li>Engineering standards followed</li> <li>Assets under version control</li> <li>Unit &amp; component tests executed</li> <li>User Stories satisfy acceptance criteria</li> <li>NFRs met &amp; No must-fix bugs</li> </ul> <p><i>User Stories accepted by Product Manager</i></p>	<ul style="list-style-type: none"> <li>Features completed by teams in ART integrated &amp; released</li> <li>Completed features meet acceptance criteria</li> <li>Acceptance test automated</li> <li>NFRs met &amp; No must fix bugs</li> <li>Increment demonstrated and feedback obtained</li> <li>Product documents completed</li> </ul> <p><i>Completed Feature Accepted by Product Manager</i></p>	<ul style="list-style-type: none"> <li>Features released by all trains and meet acceptance criteria</li> <li>Deployed on Lab/SI environment</li> <li>System end to end integration, verification and validation done</li> <li>Regression testing done</li> <li>NFRs met &amp; No must fix defects</li> <li>Solution Documents updated</li> </ul> <p><i>Solution Accepted by Solution Owner</i></p>	<ul style="list-style-type: none"> <li>Features completed and meet customer acceptance criteria</li> <li>End to end integration completed, Solution validated and accepted by customer</li> <li>NFRS met</li> <li>No must fix defects</li> <li>User Documents completed</li> </ul> <p><i>Solution Approved by Customer</i></p>
KPI	<ul style="list-style-type: none"> <li>KPI 1 - Static code analysis</li> <li>KPI 1a - Code quality</li> <li>KPI 2 - UT code coverage</li> <li>KPI 4 - Standardized APIs</li> <li>KPI 8 - Deployment downtime (Dockerization)</li> <li>KPI 9 - Architecture availability</li> <li>KPI 10 - Design availability</li> </ul>	<ul style="list-style-type: none"> <li>KPI 2 - UT code coverage (VAPT)</li> <li>KPI 3 - Regression Tests automated (functional)</li> <li>KPI 6 - Internal Defect Removal Efficiency</li> <li>KPI 8 - Deployment downtime (Dockerization)</li> <li>KPI 13 - Product documentation</li> </ul>	<ul style="list-style-type: none"> <li>KPI 3 - Regression Tests automated (E2E solution)</li> <li>KPI 5 - Solution Quality</li> <li>KPI 6 - Internal Defect Removal Efficiency</li> <li>KPI 7 - UAT Quality(SI to UAT)</li> <li>KPI 8 - Deployment downtime</li> </ul>	<ul style="list-style-type: none"> <li>KPI 3 - Regression Tests automated (E2E solution)</li> <li>KPI 7 - UAT Quality (UAT to Production)</li> <li>KPI 8 - Deployment downtime</li> <li>KPI 8a - Deployment Readiness</li> <li>KPI 14 - Solution documentation</li> </ul>

# Tools in Use





# Management Review & Control Rhythms

- ✓ Strategy workshop - annual
- ✓ Board reviews - monthly
- ✓ CMB reviews - monthly
- ✓ QMB - quarterly
- ✓ All hands Meetings - monthly
- ✓ PIBs & Product progress reviews – monthly/ on demand
- ✓ Solution Delivery/project progress reviews/DDRs - weekly & monthly
- ✓ Project Steering Group meetings - Change & approval - on demand
- ✓ Support & Operations reviews - monthly
- ✓ Status Reports – weekly & monthly
- ✓ Metrics Reports – monthly
- ✓ Customer engagement meetings – on demand



# Contact

Purpose	Contact Person	Contact E-mail
For queries with respect to Quality Management System	Viswanath Irukuvajjala	<a href="mailto:Viswanath.Irukuvajjala@tecnotree.com">Viswanath.Irukuvajjala@tecnotree.com</a>



# Tecnotree

## THANK YOU



Empowering Digitally Connected Communities



# Revision History

Version .No	Updated By	Reviewed and Approved By	Effective Date	Changes Made
1.1	Viswanath I	Mohan MC	03-Aug-20	Updated verbiage throughout the presentation slides
1.2	Viswanath I	Mohan MC	03-May-21	<ol style="list-style-type: none"><li>1. Updated verbiage throughout the presentation slides</li><li>2. Updated Management Review &amp; Control rhythms meeting frequency</li><li>3. Realigned slides for better readability</li></ol>
1.3	Viswanath I	Leena K	07-Sep-22	<ol style="list-style-type: none"><li>1. Updated to Org standard template</li></ol>

