

Project Stage Gating and Progressive Elaboration

Managing Projects and the Requirements Process

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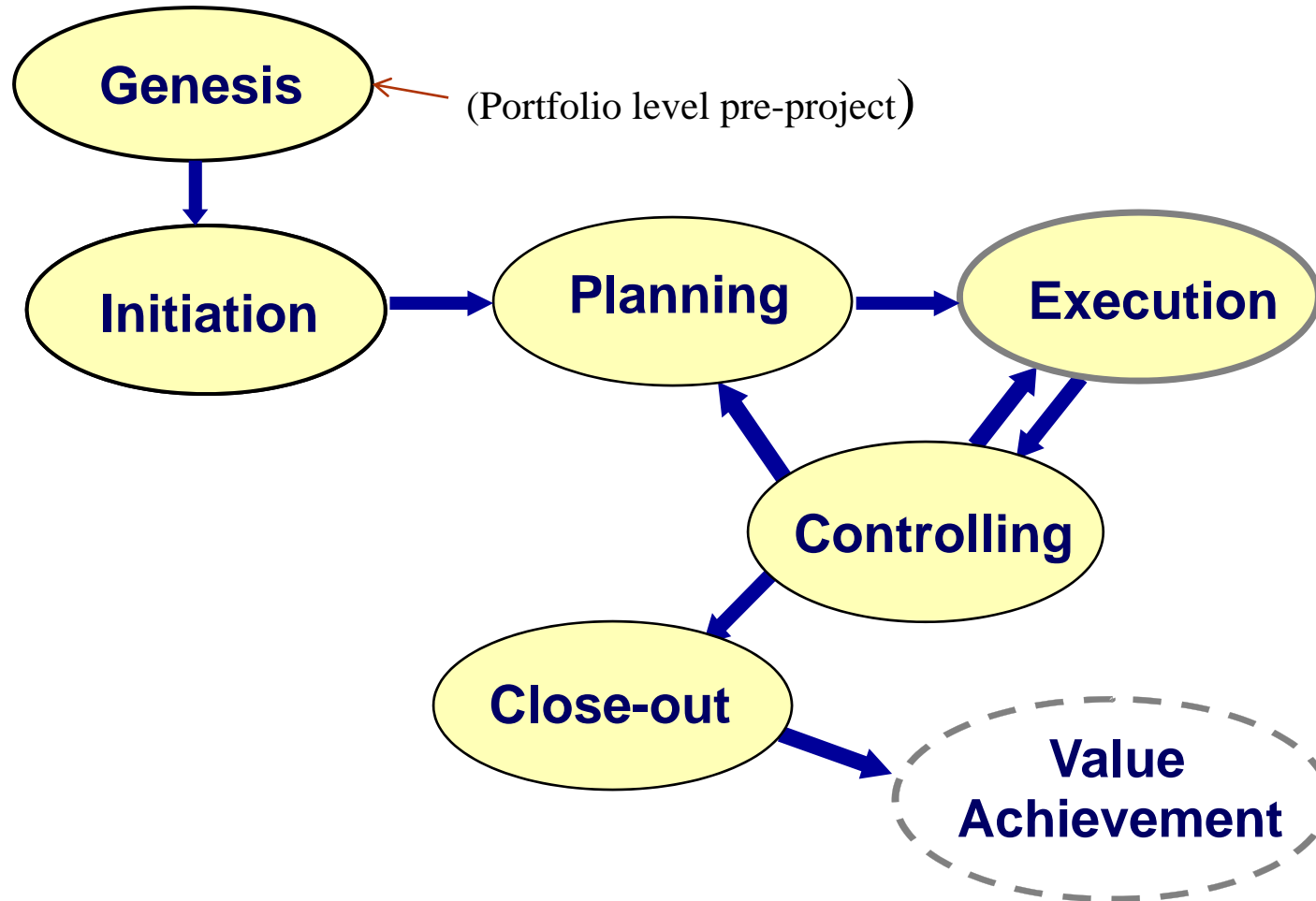
Former CTO – Sunoco

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Presentation Objectives

- Show how to Link Portfolio Management to progressive value stage gates thru the project life cycle.
- How to apply common requirement Processes to various types of IT Projects (COTS, Waterfall, Agile)
- Types of requirements used in conjunction with the PM process and the system development lifecycle(SDLC).
- Effectively engage infrastructure, architecture, and quality reviews consistent with the level of “known” requirements.
- Techniques of Progressive Elaboration of Requirements and Design with Project Management phase stage-gate controls.

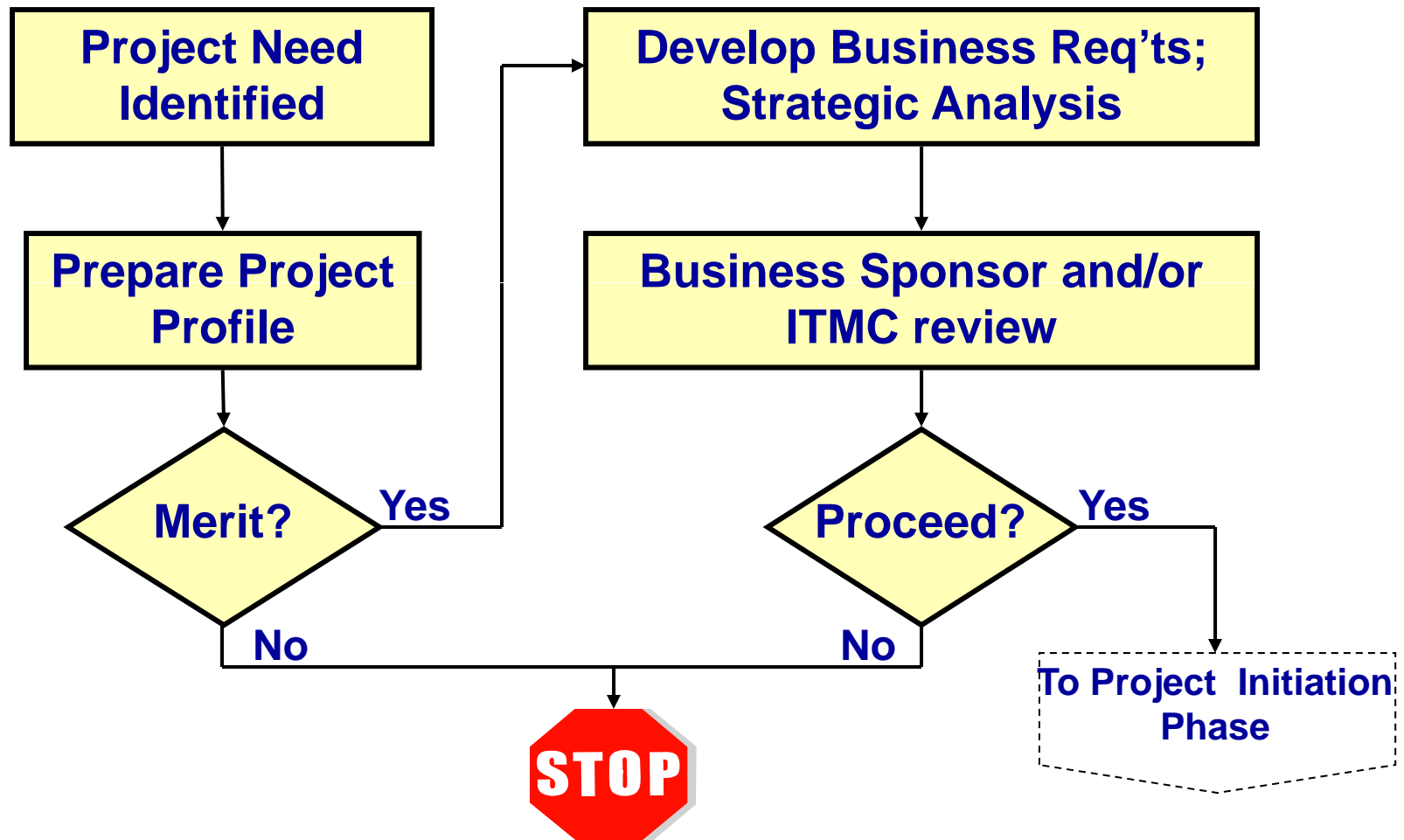
Sample IT Project Process



Genesis Phase Objectives

- Improved portfolio management of IT projects
 - Consistent process for identifying, evaluating and prioritizing IT projects
 - Screen out non-viable projects
 - Avoid multiple evaluations of initiatives
- Conduct pre-project strategic analysis to define Scope of Project
 - High level benefits case
 - Alignment to Corporate business objectives
 - Fit to IT Plans and Roadmaps
 - Risk and opportunity assessment

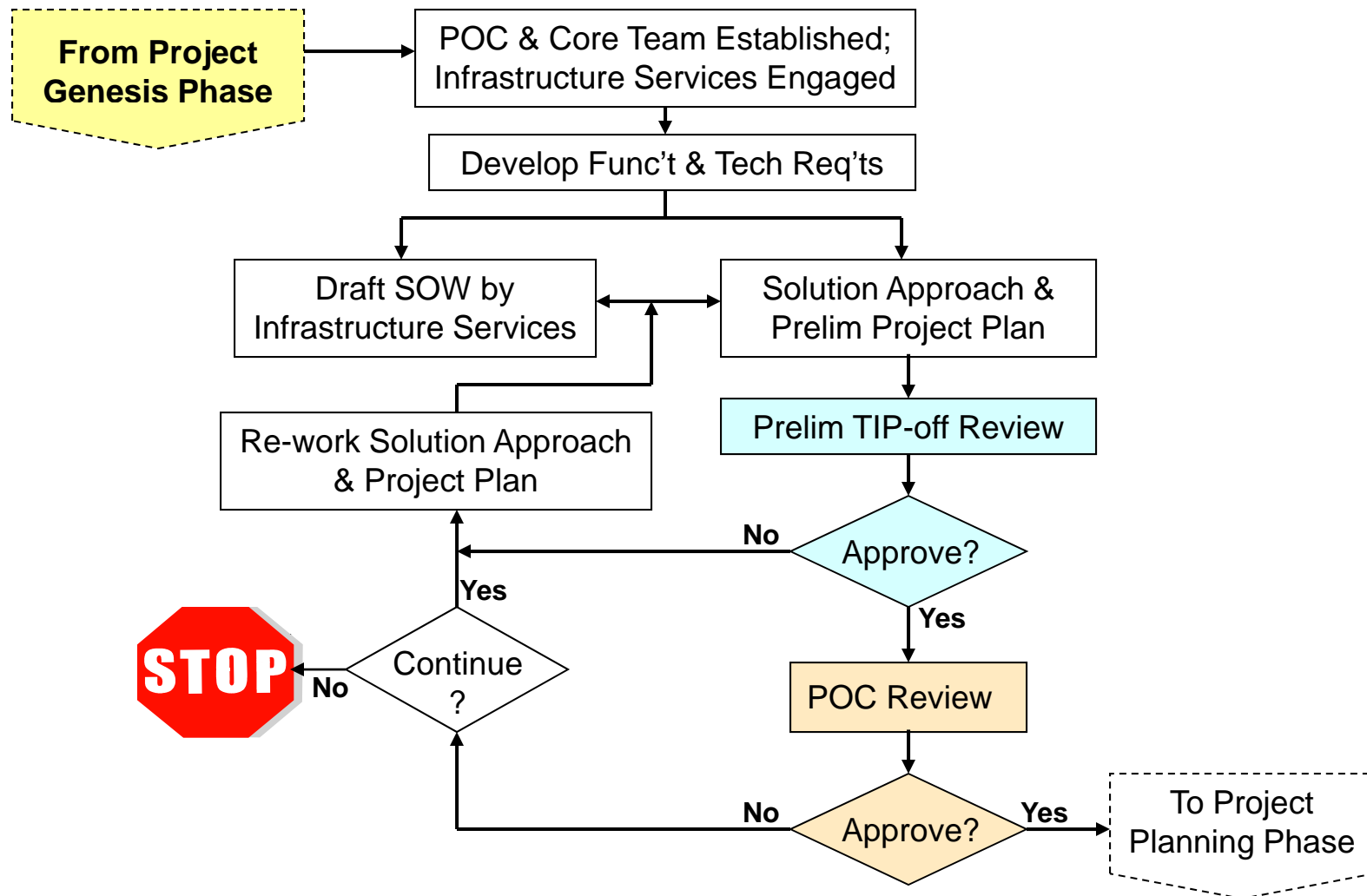
Genesis Phase Steps



Initiation Phase

- Activities done to define the project in sufficient detail to enable a decision on whether to proceed
- Objectives:
 - Develop project requirements – 1st iteration of function, tech & infrastructure
 - Functional Requirements based on Process group decompositions
 - Elicitation typically moves from interview to collaboration team by process group.
 - Issue RFP's as needed (phase 1B)
 - Define solution approach (can be >1 alternative) – buy vs. build
 - Prepare Preliminary Project Plan ($\pm 35\%$ cost)
 - Obtain agreement to proceed with project

Initiation Phase



Requirements and Project Management –

- Multiple issues, multiple stakeholders & providers
- Requirements Definition
 - Functional – High Level – problem in business terms
 - Business – Business Processes – scope and decomposition of processes
 - Technical / Architecture – Compliance to standards or variance justifications – Build (& approach) vs. Buy and package selection
 - Infrastructure – Networks, Computing Platform, Database, Performance
- Solution Definition
 - Solution Architecture
 - Design Specifications

Preliminary Project Plan- Integration

Section	Project Plan Section
PART 1	BUSINESS NEED
1.1	Project Request
1.2	Project Background
1.3	Business Justification
PART 2	PROJECT REQ'TS
2.1	Scope of Effort
2.2	Requirements Definition Business Process Defined
PART 3	SOLUTION ARCHITECTURE
3.1	Project Deliverables
3.2	Solution Architecture

Section	Project Plan Section
PART 4	PROJECT MGT PLAN
4.1	Project Approach
4.2	Project Team Organization
4.3	Project Schedule
4.4	Project Cost
4.5	Success Criteria
4.6	Acceptance Procedures
4.7	Project Change Management
4.8	Assumptions, Constraints & Dependencies
4.9	Risk Assessment
PART 5	LINKS TO PROJECT DOCUMENTS

Preliminary TIP-Off Review

- **Technology, Infrastructure, Project Management Office (TIP-Off)** review is conducted by a cross section of IT executives and architects. Combined “Quality review” of key project elements.
 - Review for solution architecture, technical alternatives, strategy, security & infrastructure impacts
 - Reviews/approves any non-standard technology & Architecture
 - Reviews for project management process/deliverables

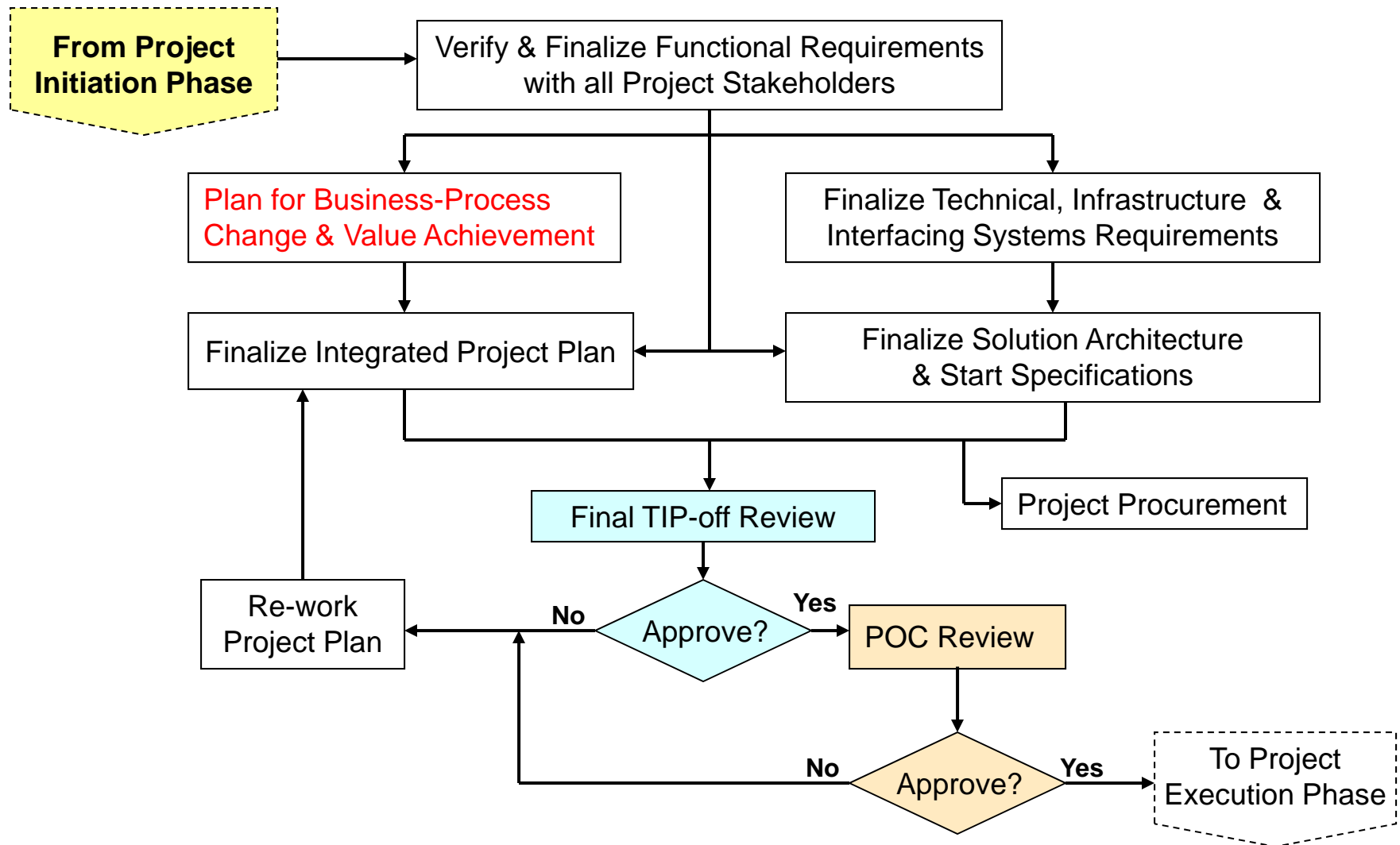
Keys to Functional Requirements

- Stakeholder review – include the right stakeholders
- Include the right business processes
- Develop agreed upon signoff of deliverables – effective stakeholder representation
- Conflict resolution Process – Requirements can be conflicting
- Develop specific use cases for design, build, and testing
- Allow the Requirements to also progressively elaborate
- Tie back to the Business Case with a focus on Benefits traceability.

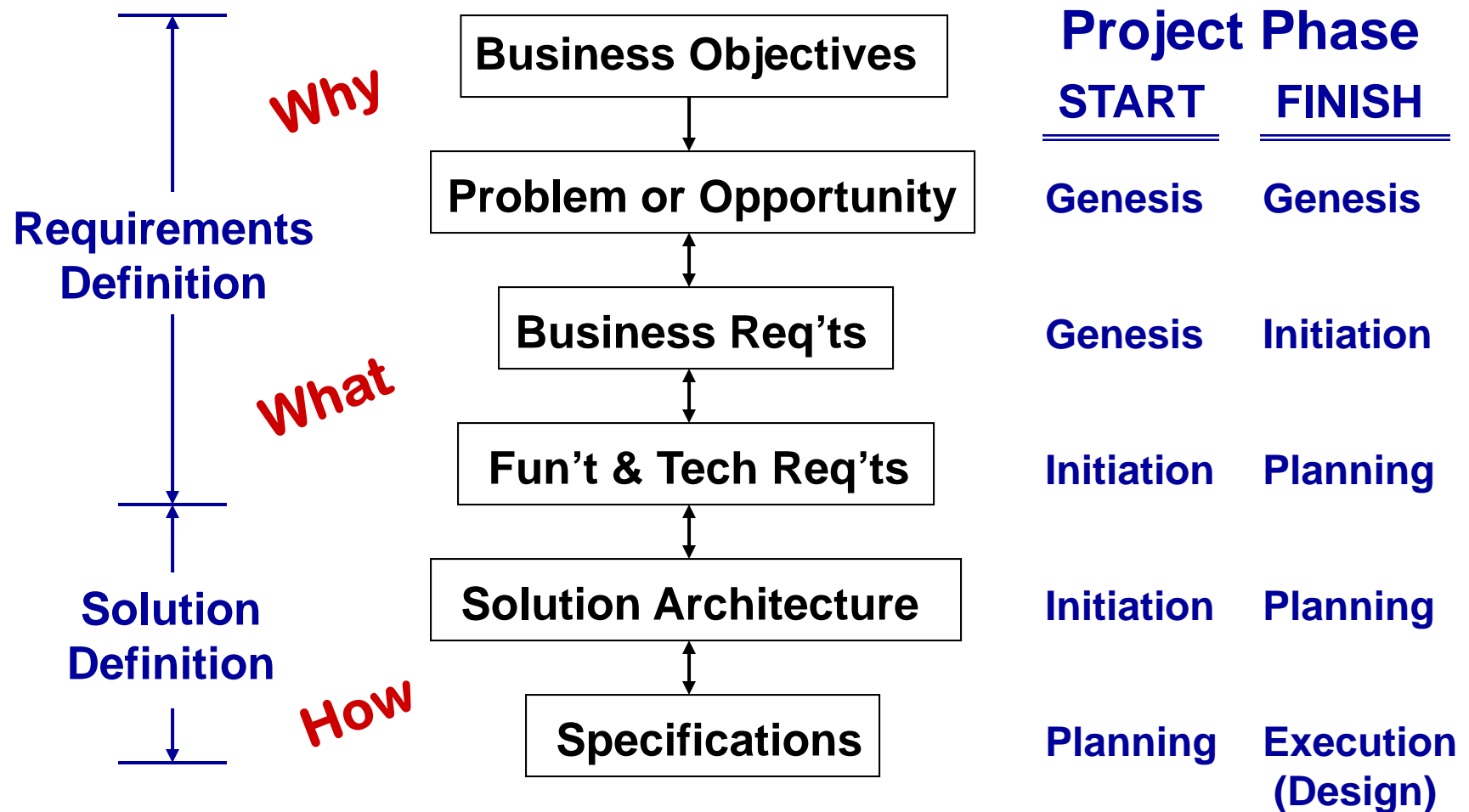
Planning Phase

- Activities done to fully plan the work required to create the project product and gain final approval for the project
- Objectives:
 - Finalize all project requirements (Process to functional, technical and infrastructure)
 - Finalize solution approach
 - Design spec is not yet complete (normally should be 30-50% complete)
 - Prepare Integrated Project Plan ($\pm 15\%$ cost and benefits final)
 - Includes infrastructure plans
 - Includes sub-contractor plans, interfacing group plans,
 - Includes training, testing, deployment and migration plans
 - Obtain agreement to proceed with project

Planning Phase



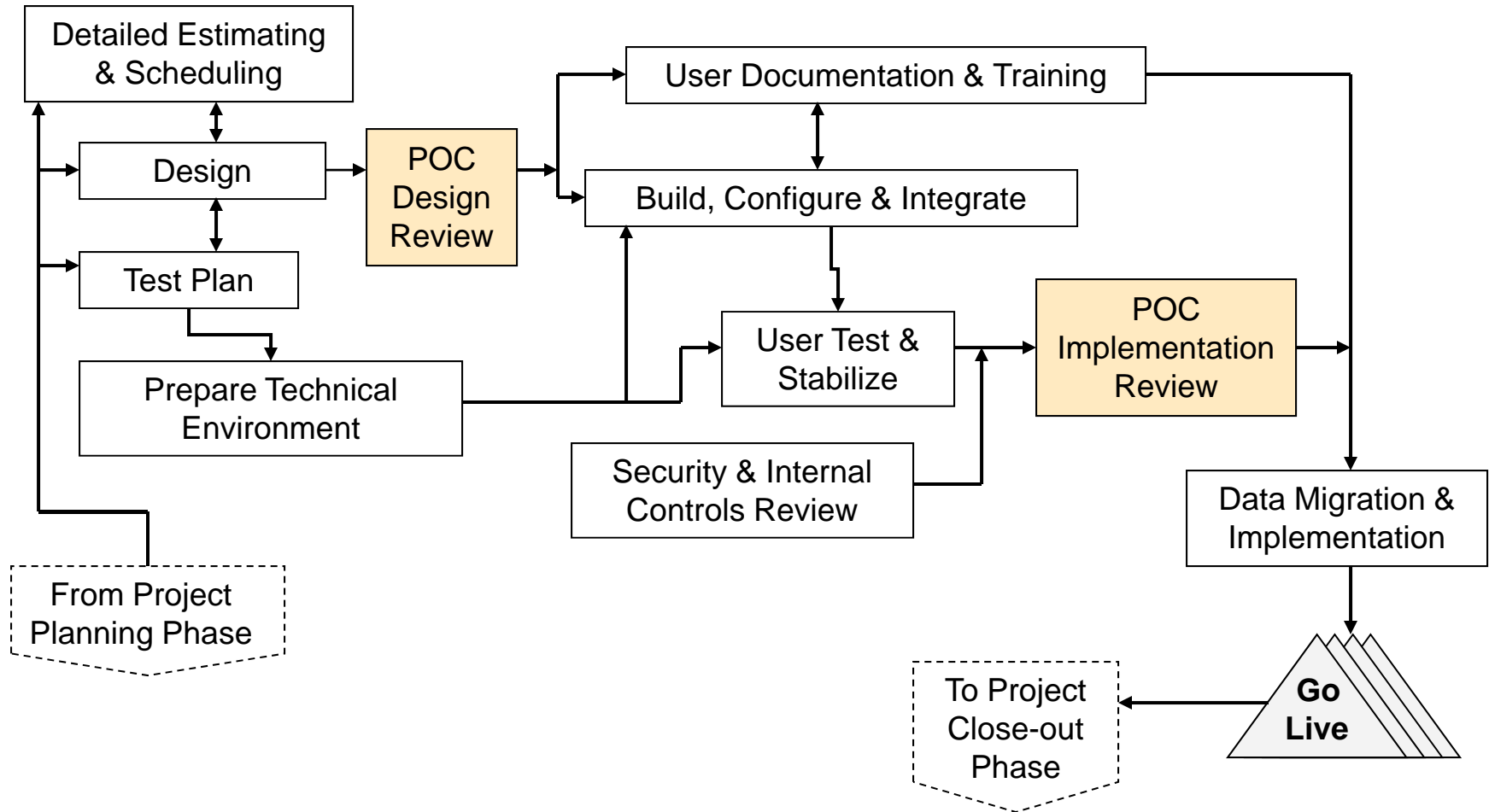
Requirements Flow to a Solution



Value Achievement Business Process Change

- Value Achievement Plan:
 - Plan and actions to bring the project benefits to fruition
 - Aligns original Business case to the recommended solution
- Business Process Change Plan:
 - Ensures successful implementation of the change
 - Addresses training, ongoing support & communications

Execution Phase Steps



Controlling Processes

- Staffing & Resource Management
- Deliverables Acceptance !!
- Change Management
- Project Communications
- Contract Administration
- Risk Monitoring & Control
- Project Budgeting & Control
- Project Progressing & Control
- Quality Assurance & Control

SDLC Methods

- COTS (Commercial Off-the Shelf Software)
 - Configure package workflows and validations
 - R-I-C-E customizations
 - Reporting
 - Interfaces
 - Conversion
 - Extentions
- Agile – MSF method of interative design, build, test
 - Multiple Agile approaches – Vary at Execution Phase is recommendation
- Waterfall – large vs. small projects
 - Smaller Projects need fewer controls and less overhead

Close-out Phase

- Confirm requirements complete or backlog of requests or Phase N requirements are established and prioritized.
- Conduct ‘seamless transition’ from Development to Support Team and Infrastructure Operations
- Confirm all deliverables complete/ accepted
- Complete decommissioning of legacy systems and/or systems components
- Stakeholder Reviews – assure Change Control of the Business Process is consistent with intended plans.

Conclusion

- Use Standard Project Management Methodology and Requirements Analysis in a consistent manner:
 - Business Case analysis – Key driver & basis of review
 - Evolve Requirements – progressive elaboration
 - Tie Requirements Processes to the PM project Phases
 - Business Sponsor & Stakeholder involvement
 - Project Management consistency
 - Tie the reviews and stage gate approvals to the Phases and elaboration steps of requirements
 - Business benefits being achieved – Change Management