

Looking at Project Management in the Contracting Process

Scott Ilg

Site Manager, Germany

Defense Acquisition University



Project Management

- **Understand why Project Management skills are valuable**
- **Know what are essentials for every project**
- **Learn to use the right communication tool for a given situation, and understand how project problems arise when communications fail or team members don't use common project terminology**
- **Learn the best practices of building and sustaining teamwork and projects and their related contracts**
- **Understand the project cycle and how to use management techniques**

What Is A Project?

- **Jobs, Contracts, Programs or just your Work**
- **Launching a space shuttle, developing a new product, introducing a new service or responding to a request**
- **Short-Term efforts to meet the organizations strategic objectives and to implement changes**
- **The process that transforms an unsatisfactory state of affairs into a better state within certain time and resources**



Are Projects Taking On A Central Role In Your Organization?

- What types of Projects?
- Is Project Management a Critical Issue for Contract Managers?



Project Management Applications in Business and Industry

- Construction industry
- Industrial projects
- Marketing programs
- Hospital capital programs
- Government activities
 - DODD 5000.1 and DODI 5000.2
 - Defense Acquisition Guidebook

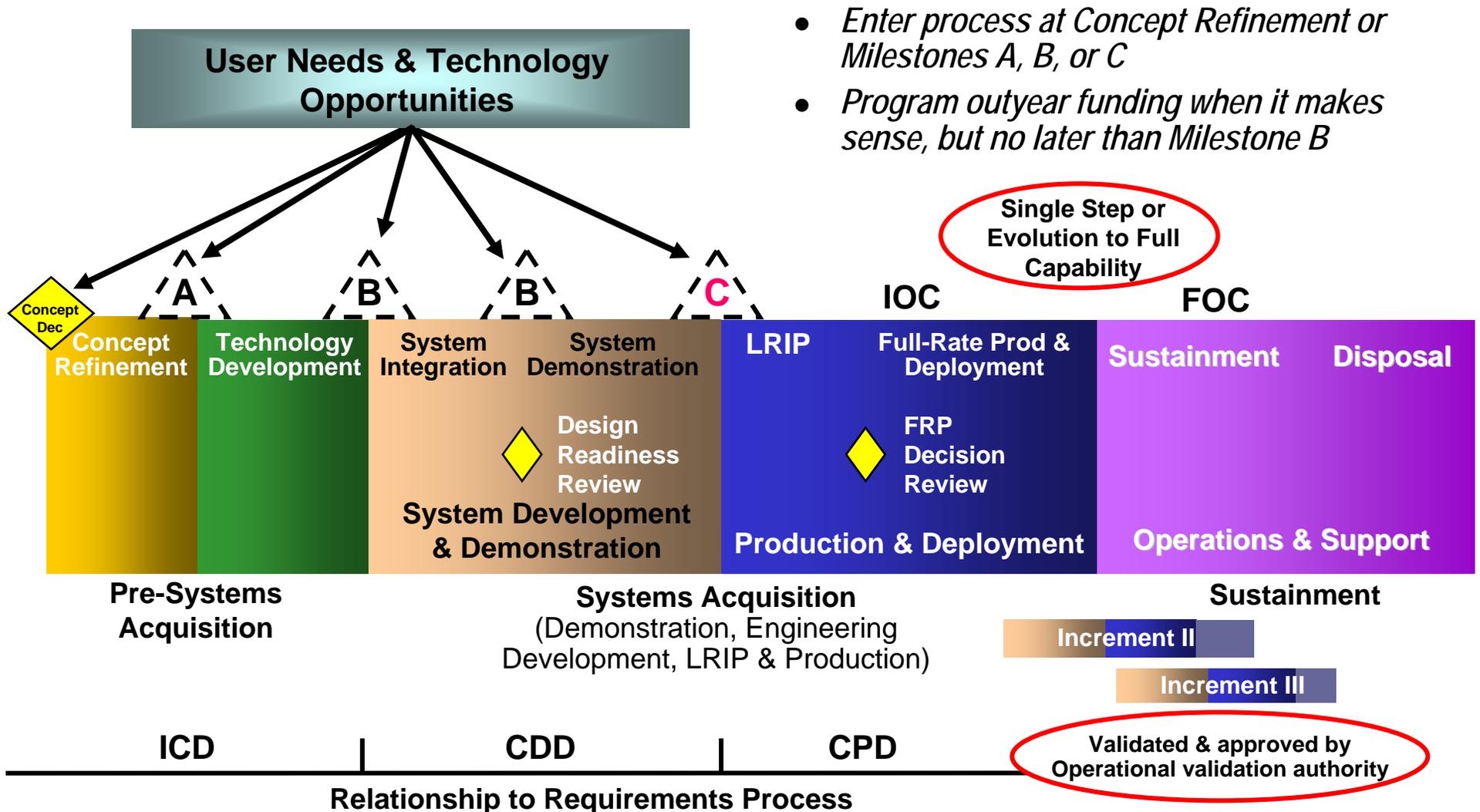


Defense Acquisition Guidebook (formerly DoD 5000.2-R)

- Provide non-mandatory guidance on best practices, lessons learned and expectations
 - All mandatory/statutory requirements (“shall do’s”) moved to DoDI 5000.2
- Guidebook focuses on processes (“how to”)
 - Designed for electronic use
 - Built-in links
 - 520 pages in print form.
- Reduces prescriptive regulatory policy; gives PMs more flexibility for innovation

Guidebook is on line at <http://akss.dau.mil/dag>

Defense Acquisition Management Framework



- Enter process at Concept Refinement or Milestones A, B, or C
- Program outyear funding when it makes sense, but no later than Milestone B

Common Reasons for Failure

- **Unclear scope or directive, objectives or requirements**
 - **Changing requirements or scope**
- **Poor project management**
 - **Lack of planning**
 - **Not knowing where to go to access project information**
 - **Cost and schedule overruns**
 - **Lack of clear deliverables having timeframes for tasks**
- **Lack of senior management support**
 - **Lack of resources**
 - **Undefined project end date**
 - **Not knowing who is on the project**
 - **Lack of buy-in and accountability**

Agree or Disagree

- **The future of most organizations depends on successful projects and their related contracts**
- **Project performance is very team-dependent**
- **Contracts are risk management tools**
- **Preparing and issuing a solicitation is a project**
- **Preparing and submitting a bid or proposal is a project**
- **Evaluating and selecting a qualified buyer is a project**
- **Negotiating and forming a contract is a project**
- **Administering a contract is a project**
- **Buyers do not always know what they want**
- **Budgets are tight and competition in the marketplace is tough**



Definition of Project Success

- **Project success is delivering a result that does what it is supposed to; when it is supposed to; for the predicted development, operating, and replication costs; and the with reliability and quality expected**
- **Whether for survival or to sustain market leadership, projects are the key to succeeding in world competition**
 - **Competition pressure is relentless, and often times, severe!**



Advantages of Applying Project Management Principles

- Make participants think through in greater detail
- More efficient use of resources
- Clear picture of project that is communicable
 - Graphic presentation
- Enables true management by exception
- Provides management with data
 - Planning, Scheduling and Controlling
- Enables quick rescheduling of project phases
- Improve labor relations



ACQUISITION PLANNING DEFINITION

FAR 7.101 - Process by which the efforts of all personnel responsible for an acquisition are coordinated, and integrated through a comprehensive plan for fulfilling agency needs in a timely manner and at a reasonable cost



The Project Manager & Relationship Management

- **The project organization structure is the human framework within which all project objectives must be achieved.**
- **There is no ultimate or perfect approach to designing a project organization.**
- **Each project is unique and the organization structure should support the individual characteristics of the project.**
- **Project organizations should be viewed as dynamic, changes should be both planned for and anticipated.**

- **A strong project organization structure will have the following characteristics:**
 - **Strong user organization sponsorship**
 - **Active steering committee support**
 - **Clear lines of responsibility, authority and accountability**
 - **Appropriate mix of user and technical personnel**
 - **Project work accomplished with minimal resources**
 - **Effective flow of communication**
 - **Small staff to manager ratios**
 - **Minimal reporting layers with no unnecessary tiers**



The Project Manager & Relationship Management

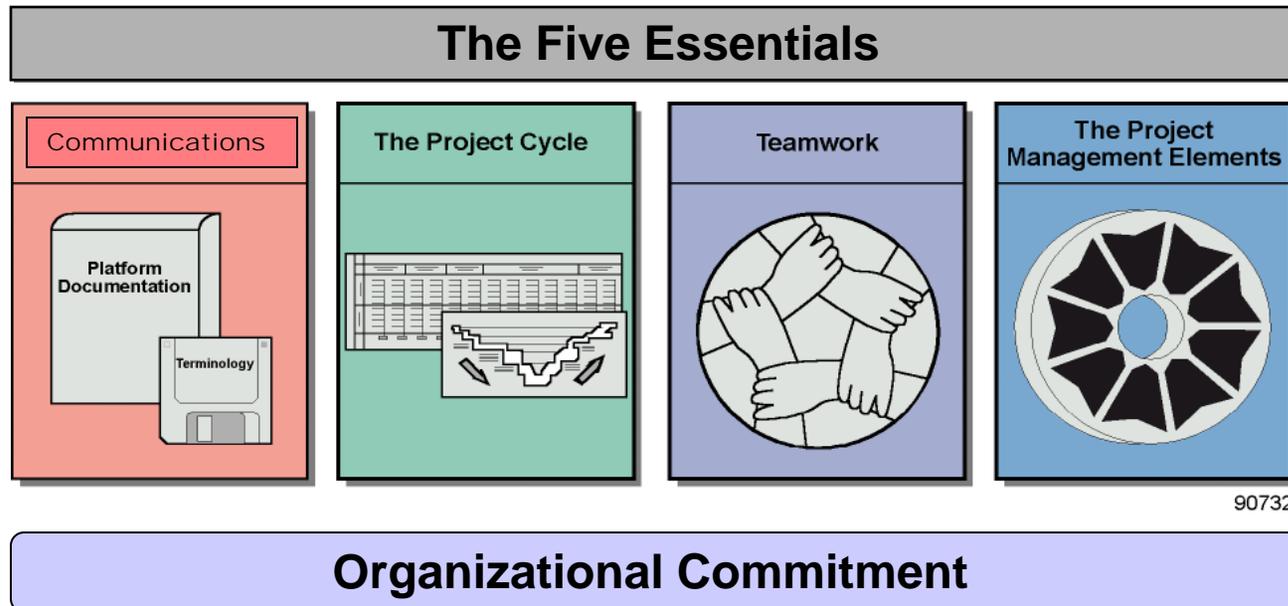
- **A successful project team generally displays the following attributes:**
 - Mutually agreed and well communicated goals
 - High level of commitment to project objectives and quality
 - Regular flow of two way communications
 - Innovative ideas communicated and implemented, as appropriate
 - Effective issue resolution process
 - Supportive and cooperative relationships among team members
 - Motivational incentives that are beneficial to project and team



Where are you going?

- **Could be Source Selection Authority, Milestone Decision Authority, Senior Management Committee; Executive Committee; Strategic Planning Group; Etc.**
- You need to know 2 things:
 - 1. Who is really in charge?**
 - 2. What are their expectations?**

Essentials for Every Project



- *Communications* and *Teamwork* are always present in the project environment
- The Project Cycle is *SEQUENTIAL* and may be tailored for each project
- Project Elements are *SITUATIONALLY* applied throughout the project cycle

- **Organizational Commitment is for:**
 - **Setting the overall objectives**
 - **Establishing priorities**
 - **Staying the course**
 - **Top-down, project culture**
 - **Obtaining buy-in through shared discovery**
 - **Keeping the faith in the vision by staying focused on the long view**

Communication

- **Communication problems are the root cause of many project failures**
- **Techniques for communicating in the project environment and a common vocabulary are prerequisites for developing teamwork and discussing the remaining Essentials**
- **Communicating is difficult enough in familiar work, social and family settings**
 - **In a Project, you are often communicating with people previously unknown to you!**
 - **You get varied backgrounds, languages, attitudes and vocabularies**



What is the most important communication link in any organization?

- **The CUSTOMER link!**
 - **Organizations that cease to communicate effectively in giving and receiving information with their customers are destined for failure sooner or later.**

Integrating vertical communications

- **Start with a Project vision**
- **Coach project members in understanding and projecting that vision to the rest of the company**
- **Best visions are based on core competencies and customer satisfaction**
 - **Too often project vision statements fail because they are based on what the project team wants to become; not what they are already good at that they can build on**

Eloquence as a tool of communication

- **Remember: All communication is personal**
- **But you still can have a dialogue with a large audience**
- **Say exactly what you mean**
- **Get to the point**
- **Speak in images**
- **Words to avoid**



Relationship-busters that can kill your own message

- **Failing to listen**
- **Discourtesy**
- **Jumping to conclusions**
- **Trying too hard to be liked**



The Value of a Common Vocabulary

- Enables buyers to effectively communicate needs to sellers
- Enables sellers' team members and subcontractors to effectively communicate
- Reduces the potential for mis-communication and conflict
- Minimizes rework due to misunderstandings
- Supports the use of a consistent Project Management discipline



How to Ensure a Common Vocabulary is used on your project

- ✓ Do not assume all parties have a common understanding of key project terms – verify
- ✓ In discussions, ask for confirming feedback
- ✓ In written communications, include definitions for key terms in your proposals and contracts
- ✓ Publish a project acronym list and make it an attachment to the proposal and contract
- ✓ Publish a glossary of key terms and their definitions and make it an attachment to the contract
- ✓ Post/display acronyms and definitions of key terms on company/organization/project web-site

Team Work

- **Forming** – “Hi, my name is _____”
- **Storming** – “O.K.! You told us three weeks ago what you’re in charge of...we got it!”
- **Norming** – “We all know that we can’t do each other’s jobs; that’s why we’re here. So, let’s rely on each to do his or her part”
- **Performing** – “The boss said the first set of milestones hit all the objectives and she’s very pleased”

Project Team

- **Who is on my team???**
 - **Ask yourself**
 - **Who can make or break my project through its life-cycle**

The Team

- Contracting Officer/Specialist
- Small Business Specialist
- Program Manager
- Budget Officer
- Engineer in Charge
- User, Customer
- COTR
- Legal
- Technical Reps
- Environmental Personnel





Effective Environment For a Productive Team

A group (two or more people) working together with:

- 1. A Common Goal(s)**
- 2. Acknowledged interdependency and mutual respect**
- 3. Acceptance of a Common Code of Conduct**
- 4. A share reward**
- 5. Team Spirit and energy**

Techniques for Building Teamwork

- ✓ **Clearly communicate organization/company:**
 - **Vision, Mission and Goals**
- ✓ **Clearly define individual and team roles and responsibilities**
- ✓ **Define and communicate a consistent project process**
- ✓ **Delegate whenever possible**
- ✓ **Empower the team, but, hold them accountable**
- ✓ **Train the team together**
- ✓ **Deal with poor-performance quickly**
- ✓ **Establish clear performance metrics**
- ✓ **Provide timely feedback on performance to all team members**
- ✓ **Establish both individual and team rewards**



Conducting a GOOD Kick-off Meeting

1. **Member introduction**
2. **Define the overall project**
3. **Describe key deliverables, milestones, constraints, etc**
4. **Review team mission and mutually develop supporting goals**
5. **Determine reporting relationships and liaison duties with other teams**
6. **Define lines of communication and interfaces**
7. **Review preliminary project plans**
8. **Pinpoint high-risk or problem areas**
9. **Delineate primary and back-up responsibilities**
10. **Generate and obtain commitment**

Project Cycle

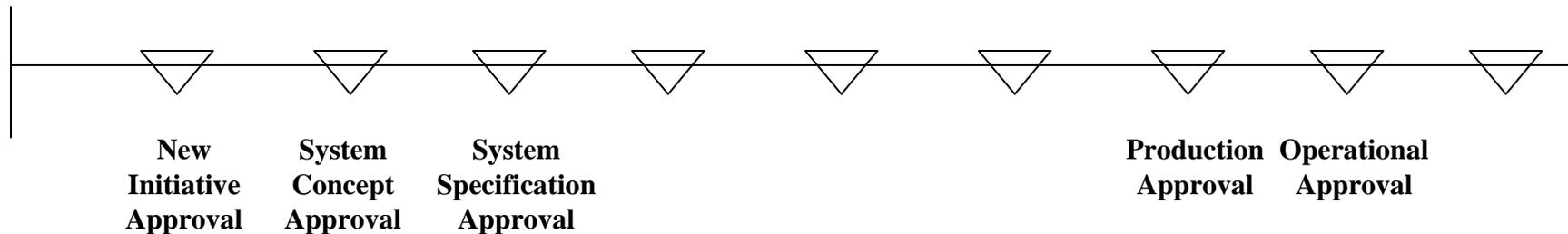
- Provides a logical framework to plan and organize project activities
- Project Cycle provides:
 - Sequential management approach
 - Orderly process
 - Methodology
 - Discipline
- Project Cycles vary, but, typically provide an orderly sequence of integrated activities performed in phases
- Many Project Cycles include control gates to ensure certain actions are successfully completed before moving on to the next phase

PM Project Model – Project Cycle

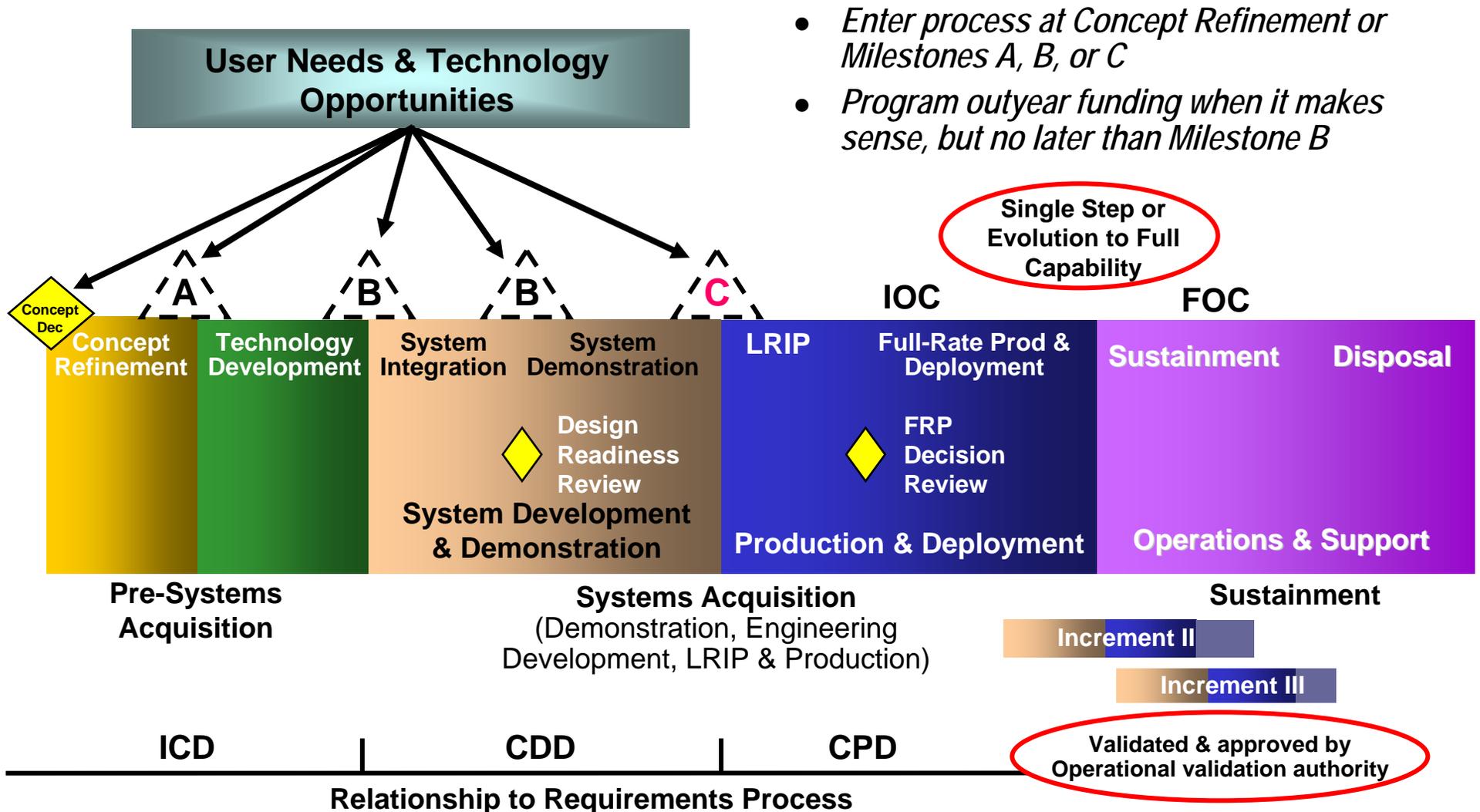


User Requirements Definition Phase	Concept Definition Phase	System Specification Phase	Acquisition Planning Phase	Source Selection Phase	Development Phase	Verification Phase	Deployment or Production Phase	Operations/Maintenance or Sales/Support Phase	Deactivation Phase
------------------------------------	--------------------------	----------------------------	----------------------------	------------------------	-------------------	--------------------	--------------------------------	-----------------------------------------------	--------------------

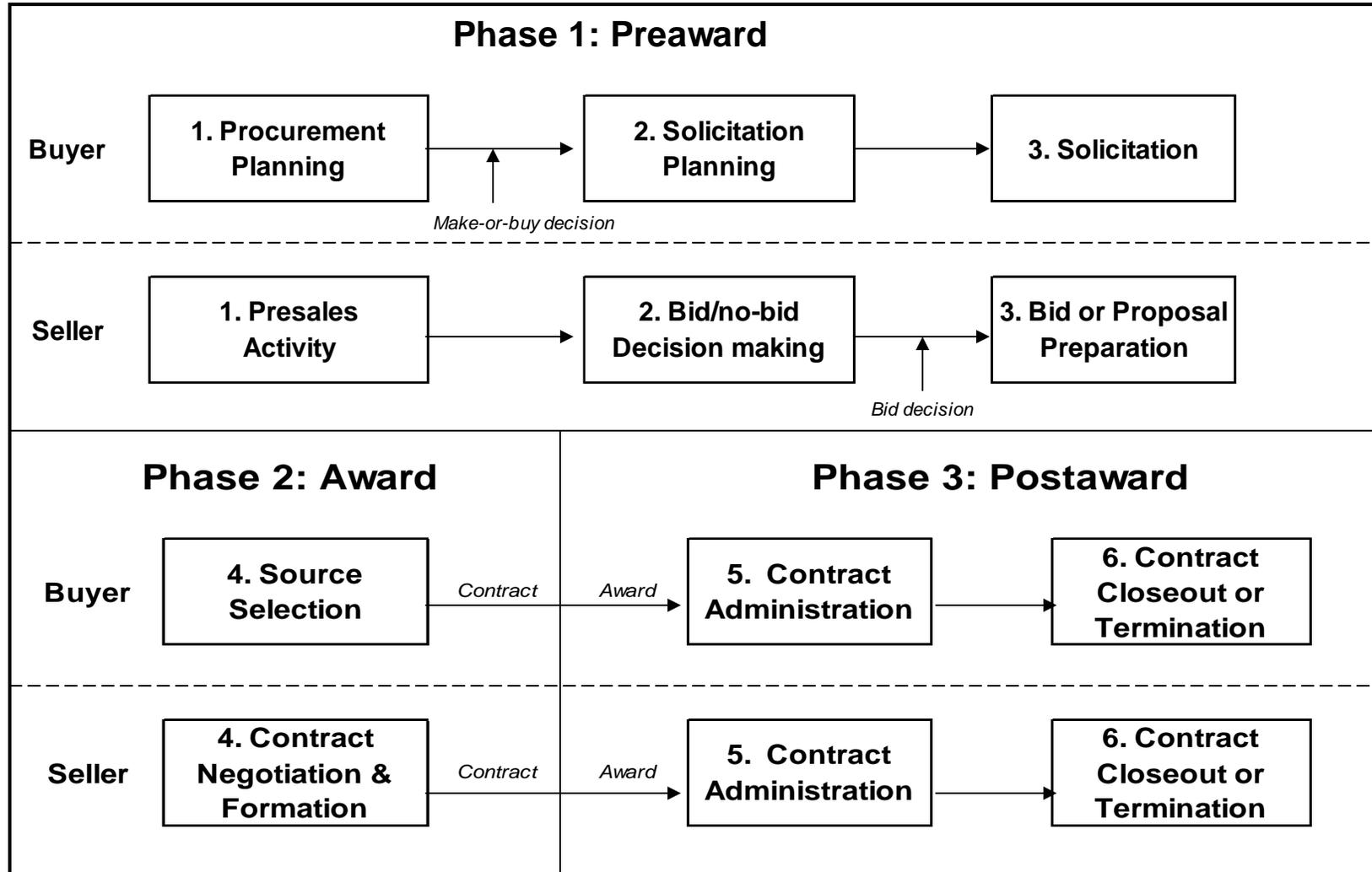
Control Gates



Defense Acquisition Management Framework



Contract Management Process/Cycle





Tailoring the Basic Project Cycle to your Project

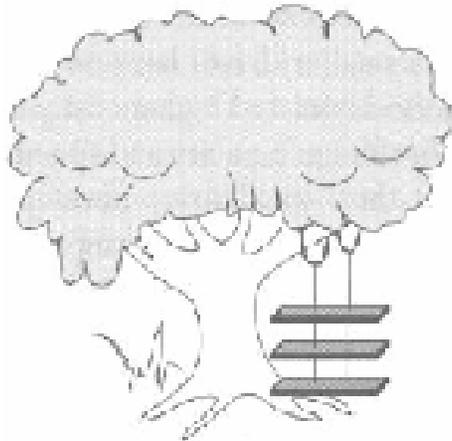
- Retain the basic phases, decision points, activities and documents – adjust formality to fit risk and complexity
- Set finite periods to conduct needed analysis, planning, and re-planning activities
- Do not eliminate the measuring and controlling procedures, but scale them to project size and complexity



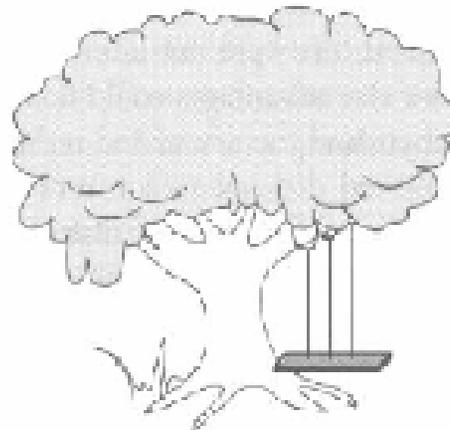
Project Management Elements

- Project Requirements – Establishing requirements and managing traceability and accountability
- Organization Options – Structuring to satisfy the requirements
- Project Team – Staffing for attributes and competencies
- Project Planning – Determining the tactical approach to achieving the requirements
- Opportunities and Risks – Maximizing the opportunities
- Project Control – Mitigating variances from the plan
- Project Visibility – Determining what is happening
- Project Status – Measuring performance against the plan
- Corrective Action – Recovering to the plan
- Project Leadership – Inspiring and motivating the team

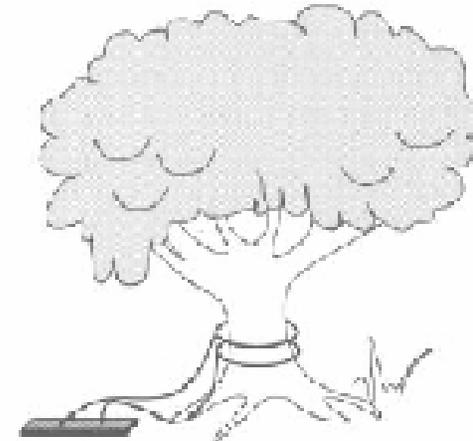
Project Requirements



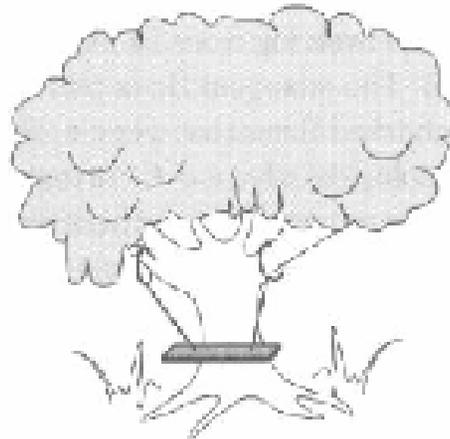
As the RFP requested it



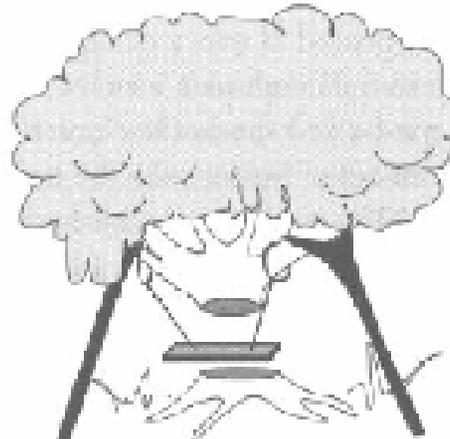
As the work statement specified it



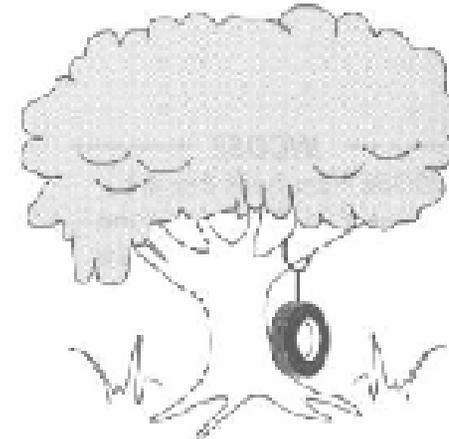
As it was negotiated



As engineering designed it



As it was built



What the customer wanted

Typical Problem Areas

- Incomplete
- Not documented
- Inaccurate
- Unclear/Vague
- Uncontrolled/Can Not be Measured
- Not specified properly
- Constantly changing
- Contradictory
- Not traceable
- No acceptance criteria

Project Requirements

- **Complete** Completely defines the client need to be satisfied
- **Consistent** Requirements do not conflict with each other
- **Correct** All requirements are known to be achievable
- **Clear** There is only one semantic interpretation
- **Traceable** There is a trail to the driving requirements need
- **Modifiable** Any necessary change can be made completely and consistently
- **Verifiable** It is technically possible to prove the requirements have been satisfied
- **Implementation Free** Free of design decisions unless they are mandated constraints



Organizational Options

- Functional Skill Centers
- Functional Product/Service Centers
- Pure Project Organization
- Conventional Matrix Organization
- Collocated Matrix Organization

Project Teams

- Define the CM and PMs role, responsibilities, and authority
- Select the right individuals for the PM, CM, and other roles
- Charter the project (written confirmation of PMs role, responsibilities, and authority)
- Select the right team members
- Manage the organization's interfaces and interrelationships, internally and externally.



Challenges for the Team

- Who does what?
- Who is in charge?
- Do we have the right people?
- Are the right people available?
- What controls does the CM have?
- Others?

What Works

- Project Charter
 - Identifies the project and its importance to the organization
 - Appoints the project manager and other key personnel
 - Establishes top level responsibilities and authority
 - Positions the support organizations and their authority
 - Places subcontractors in a service relationship
 - Acknowledges the project team
 - Establishes the funding control
 - Confirms the cognizant executive supporting the project

Project Planning

What you must know	Tools
What is to be done	<ul style="list-style-type: none"> • List of project deliverables • Work Breakdown Structure (WBS) • Scope of Work • Statement of Work
When it should be done and what is the current status	<ul style="list-style-type: none"> • Gantt Chart • Milestone Chart • Critical Path Method (CPM) • Program Evaluation Review Technique (PERT)
Who is responsible for doing it	<ul style="list-style-type: none"> • Point of contact lists • Organizational Breakdown Structure (OBS) • Responsibility Assignment Matrix (RAM)
How much is it going to cost	<ul style="list-style-type: none"> • Business Case • Cost Breakdown Structure (CBS) • Earned Value Concept

Steps to manage opportunities and risk

- 1. Inventory**
- 2. Evaluate/Probability of opportunity or risk**
- 3. Assess impact of occurrence**
- 4. Prioritize**
- 5. Develop and implement plans to take advantage of, control and mitigate**
- 6. Document results and revise plans as needed**

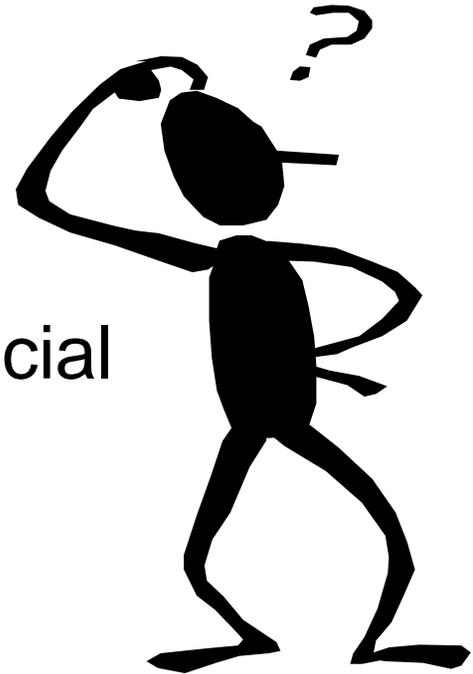


Opportunities and Risk

- **Establish an environment that encourages open discussion of opportunities and risks.**
- **Motivate the project team to assess all opportunities and risks.**
- **Maintain a high level of opportunity and risk awareness among all project participants during each program phase, particularly during the early phases.**
- **Thoroughly evaluate and pursue solutions for serious risks before declaring a jeopardy.**
- **Get customer concurrence with opportunity and risk management actions, as appropriate.**

CONTRACTING CONSIDERATIONS

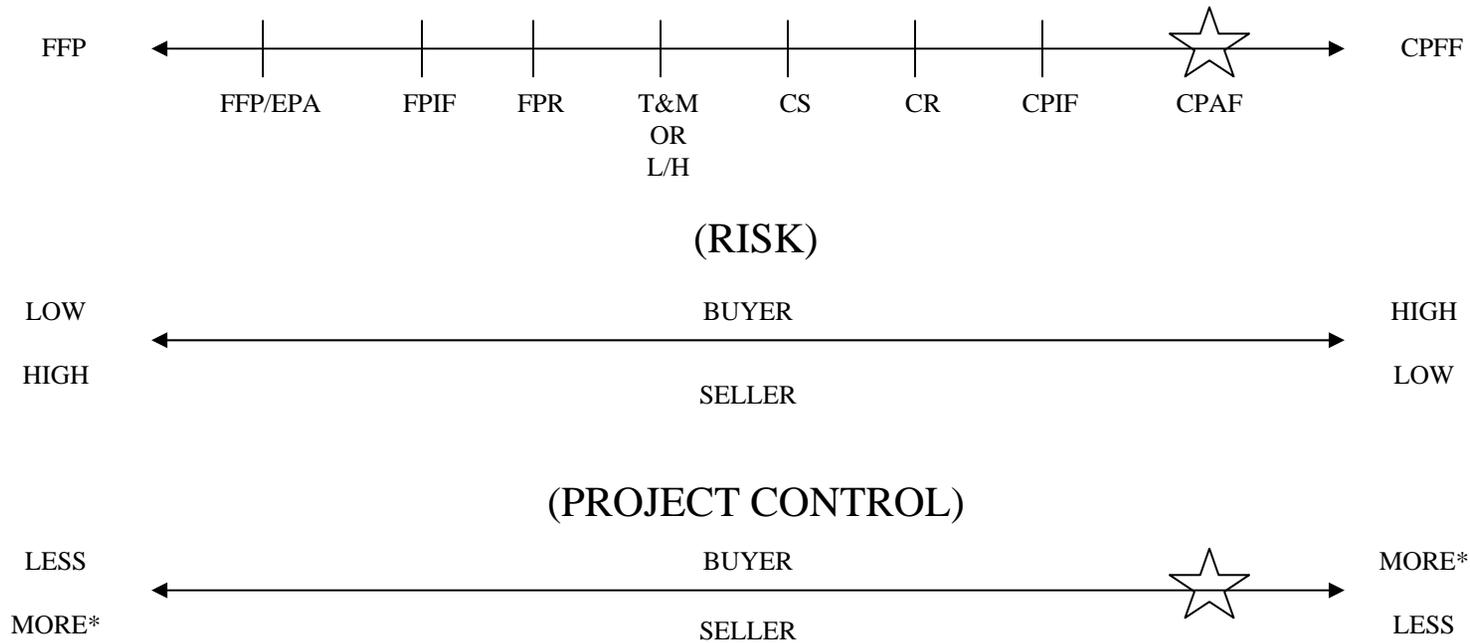
- Contract Method
 - Sealed Bid or Negotiated
- Contract Type Selection - Part 16
- Use of Multi-year, Options, or Special Contracting Methods – Part 17
- Any Special Clauses or Special Solicitation Provisions





Range of Contract Types/Risk/Program Control

(TYPES OF CONTRACTS)



FFP = Firm Fixed Price
 FFP/EPA = Firm Fixed Price w/Economic Price Adjustments
 FPIF = Fixed Price Incentive Firm
 FPR = Fixed Price Redeterminable
 T&M = Time and Materials

CS = Cost Sharing
 CR = Cost Reimbursement
 CPIF = Cost Plus Incentive Fee
 CPAF = Cost Plus Award Fee
 CPFF = Cost Plus Fixed Fee
 L/H = Labor Hour



Project Controls = Contract Controls

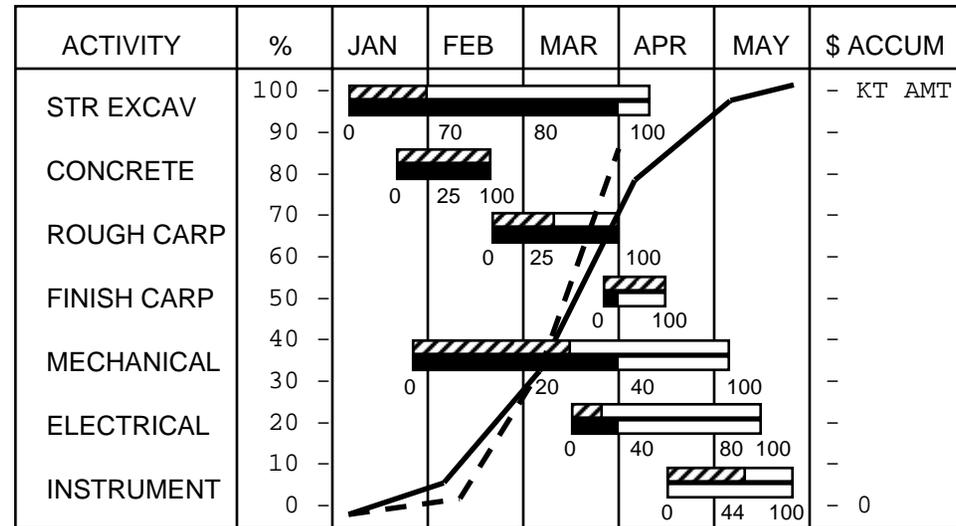
Type of Contract	Application	Control Provided
Fixed Price	Reliable prior cost experience	Technical, Cost and Schedule
Cost Reimbursement	Research development with advancing technology	Pursuit of Solution
Cost Sharing	Seller shares cost in return for use of technology	Pursuit of Share Result
Time & Material	Not possible to estimate the task beforehand	Labor and material rates
Labor Hour	Like T&M but, Labor only	Labor rates
Indefinite Quantity	Establishes price when quantity and schedule are uncertain	Per item price



Project Controls = Performance Baselines & Metrics

Performance Areas	Baselines & Metrics
Schedule	<ul style="list-style-type: none"> • Procurement Acquisition Lead-time • % on-time-delivery • Baseline Deliver Schedule • % Milestones completed on-time • Schedule Variance Index (SPI) • Cycle time (Baseline & Target)
Scope of Work	<ul style="list-style-type: none"> • # of Contract Changes • Configuration Control Baseline • # of Configuration Changes
Cost	<ul style="list-style-type: none"> • Budgeted Cost of Work Scheduled (BCWS) • Budgeted Cost of Work Performed (BCWP) • Actual Cost of Work Performed (ACWP) • Cost Variance Index (CPI)
Quality	<ul style="list-style-type: none"> • Mean Time between Failure (MTBF) • Mean Time to Repair (MTTR) • # of Outages/Product Returns • # of Product Failures
Customer Satisfaction	<ul style="list-style-type: none"> • # of Customer Service Complaints • Repeat Business • Letters of Appreciation

Bar Chart



LEGEND:

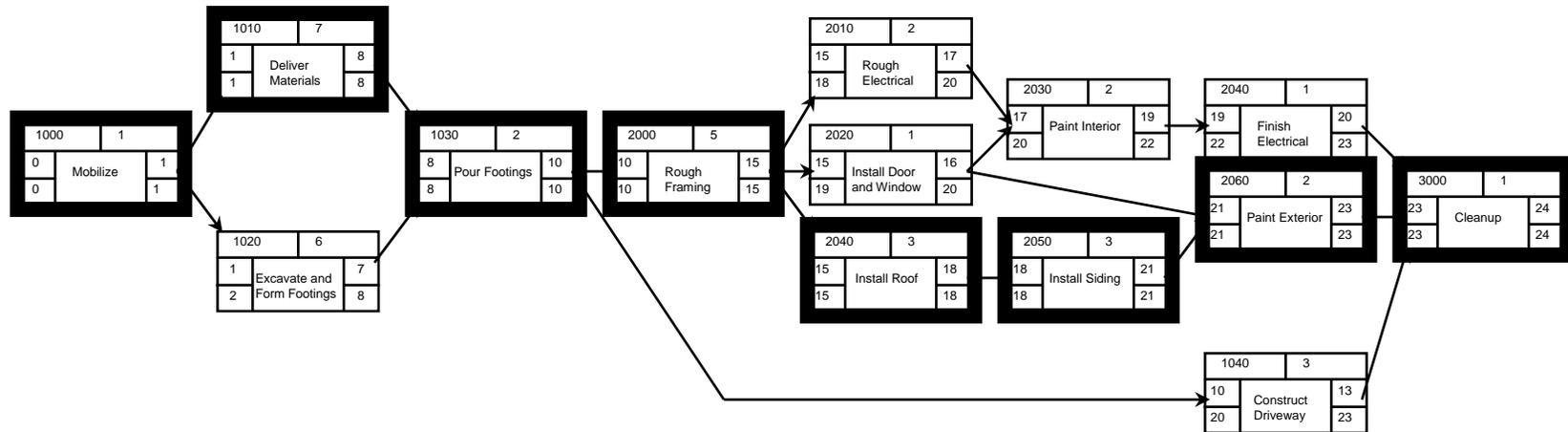
BARS: TARGET  ACTUAL 

'S' CURVE: TARGET  ACTUAL 

- **Advantages:**

- Simple to use
- Inexpensive
- Easy to understand (Less complex projects)
- Able to show limited task interdependency

CPM Chart



- **Advantages: (complex projects)**
 - Accepted as evidence in court
 - Shows high degree of task interdependence
 - Shows cause & effect, impact & delay

Project Visibility

- What information is needed?
- When is it needed?
- In what format is it needed?
- Who needs it?
- How is it best to deliver the information?
- Who should deliver the information?

Project Visibility

- Meetings
- Reports
- Monitor
 - Physical observation
 - Communication/Collaboration
 - Frequency

Project Status

- Report against the plan
 - Timely
 - Accurately
 - Completely
- Relevant data

Corrective Action Steps

1. Analyze each problem
 - The current impact
 - The impact growth if no action is taken
2. Prioritize problems from most serious to least serious
3. Identify potential solutions
4. Determine the best approach using a defined decision analysis/trade-off process
5. Implement the selected corrective action



Typical Contract/Project Problems

- Lack of leadership
- Unstable funding
- Long-procurement acquisition lead time (PALT)
- Poorly trained work force
- Excessive contract requirements
- Frequent contract changes
- Vague contract SOW/specs
- Late delivery of materials and supplies by subcontractors
- Late/lost/defective materials
- Labor disputes/strikes
- Natural disasters
- Lack of focus on quality
- Changing marketplace
- Changing technologies
- Unmotivated employees
- Lack of system integration
- Poor customer service
- Bad Design/Engineering
- Lack of Planning



Common Management Solutions to Solve Typical Contract/Project Problems

- Cut personnel
- Cut overtime
- Cut training
- Cut travel
- Cut inspections
- Reduce requirements
- Delay schedule
- Reduce funding
- Fail to change
- Reduce overhead costs
- Change vendors
- Add personnel
- Add overtime
- Add training
- Add travel
- Add inspections
- Increase requirements
- Accelerate schedule
- Increase funding
- Constantly change (Reorganize)
- Increase overhead costs
- Add vendors



Recommended Corrective Actions

- Increase leadership development
- Increase team-building
- Use improved technology
- Outsource non-core work
- Improve existing processes
- Increase use of performance metrics
- Award performance-based contracts
- Redistribute resources
- Eliminate non/low-value added work
- Improve education and training of work force
- Ensure effective supply-chain management
- Recognize and reward outstanding performance
- Remove poor performers

- **You must have clear goals**
- **Give yourself a clear agenda**
- **Let people know where they stand**
- **What's broken, fix now**
- **Set high standards**
- **Lay the concept, but let your people execute it**
- **People come to work to succeed**
- **Never lie, ever**
- **When in charge, take command**
- **Do what's right**

Gen. H. Norman Schwarzkopf, USA (Ret.)

Actions to Take

- Listen to your customers and team members to understand their needs and desires
- Teach your people: Individuals and teams about leadership
- Hold people accountable for their actions/inactions and results
- Take appropriate actions to help your team members and customers, respectively achieve their needs and desires

Actions to Take

- Conduct frequent team meetings with all of your direct reports: in-person, teleconference, or Net-Meeting
- Hold regular all-hands meetings with all company/organization/team members: in-person, teleconference, or Net-Meeting
- Conduct frequent customer and supplier meetings with key decision-makers to discuss relationship and contract/project performance goals vs. results-using agreed to performance metrics
- Develop, document, distribute and live by a set of values-Code of Conduct



Actions to Take

- Develop, document, and distribute via multi-media (e-mail, posters, website ads/articles, company newsletters, CD Roms) the following:
 - * Vision Statement
 - * Goals
 - * Performance Metrics and Results
 - Customer Satisfaction
 - Quality of Products & Services
 - Employee Satisfaction
 - On-time-delivery
 - Cycle-time
 - Revenue
 - Expenses



Future of PM and CM

- Both the Project Management and Contract Management professions, and their respective bodies of knowledge are moving from a specialty area to the Mainstream of Business Management.
- Rapid growth (more than 36% annually) of the Project Management Institute (PMI), now with more than 90,000 members worldwide – indicates the positive force PM skills are having in the marketplace.
- Likewise, the Institute of Supply Management (ISM) now has more than 50,000 members worldwide, demonstrating the importance of out-sourcing and supply-chain management, especially in commercial companies.



Professionalism is Key

- More and more organizations are looking for fewer people, with higher skill sets
- Contract Managers – Need to be knowledge of the Contract Management Body of Knowledge (CMBOK), plus possess Project Management skills to ensure successful business results
- Certifications are Critical
 - NCMA - Certified Federal Contract Manager (CFCM)
- Certified Professional Contracts Manager (CPCM)
 - ISM - Certified Purchasing Manager (C.P.M.)
 - PMI - Project Management Professional (PMP)
 - OGC – Prince 2 Certification



Applying PM in the CM Process

Business Demands	=	Business Actions
* More Outsourcing	=	More Contracts
* Fewer People	=	People with High Skills
* Greater Risk Taking	=	More Opportunities and Risk Management
* Better Products/Services	=	More Project Cycle and Technical Management
* Faster Delivery	=	Better Project Planning
* Cheaper Price	=	Better Project Cost Control

- Applying PM skills in the CM Process helps to accomplish the demands of business

BACKUP SLIDES

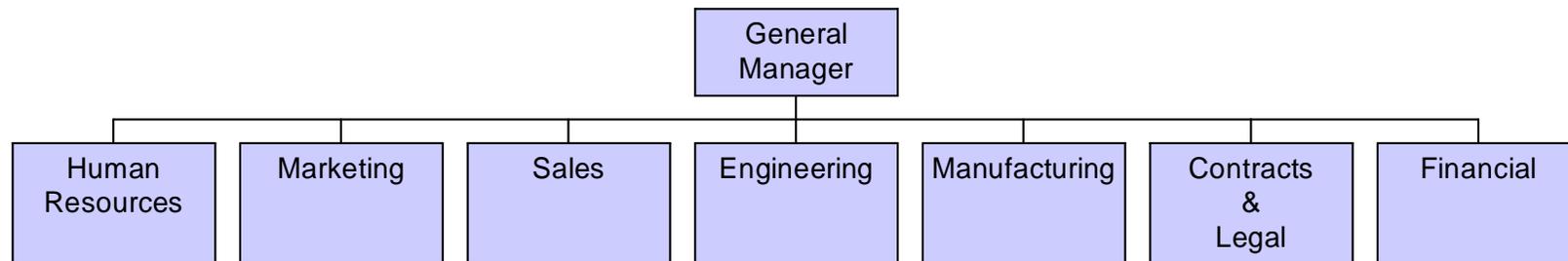
Functional (Skill Centers) Organization

Strengths

- Skill Development
- Technology Development
- Technology Transfer
- High personnel loyalty

Weaknesses

- No dedicated customer interface
- Unclear Project Priority
- Confused communication
- Difficult Schedule/cost controls



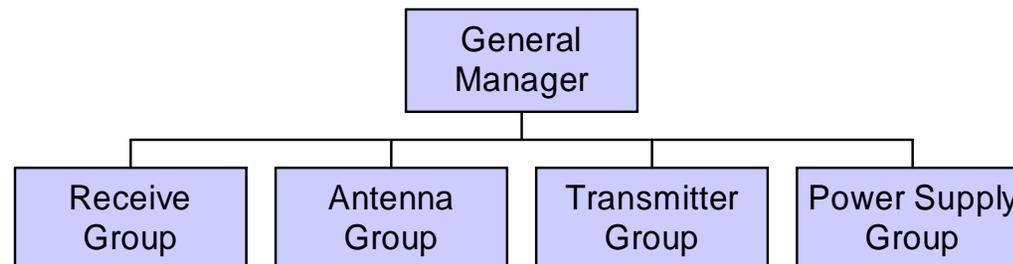
Functional (Product/Services Centers) Organization

Strengths

- Product/Service development
- Technology development
- High personnel loyalty

Weaknesses

- Unclear customer interface
- Difficult technology transfer
- Unclear project priorities
- Confused communications
- Difficult schedule/cost controls



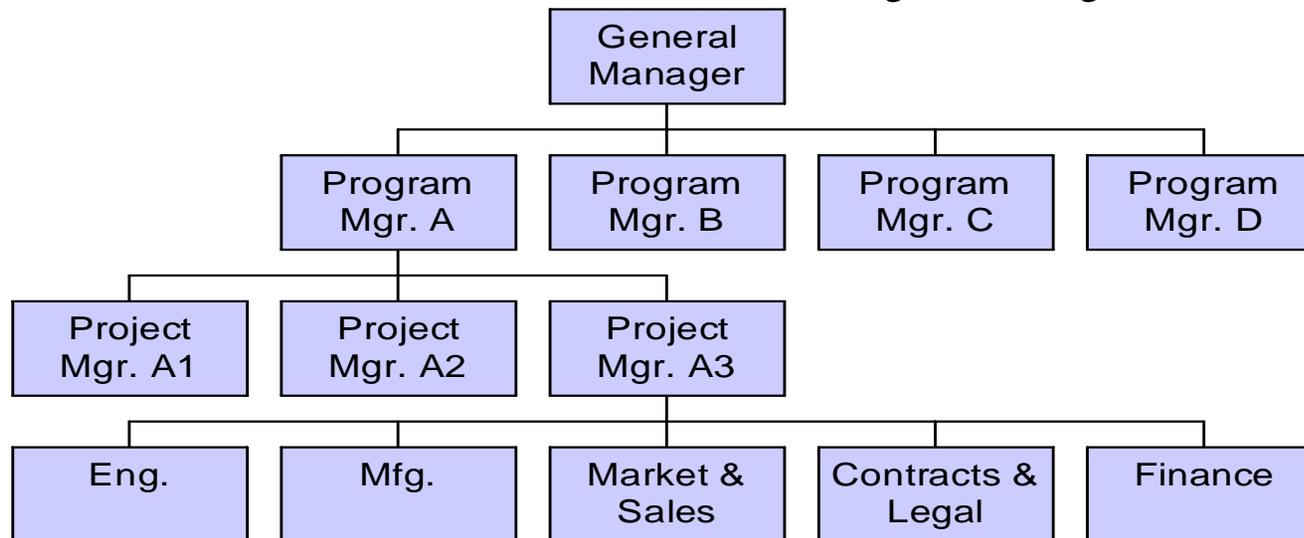
Pure Project Organization

Strengths

- Clear Accountability
- Clear Customer interface
- Strong Controls
- Strong Communication
- Dedicated resources

Weaknesses

- Talent duplication
- Less Technology awareness
- Reduced functional development
- Irregular workloads
- Higher staffing levels



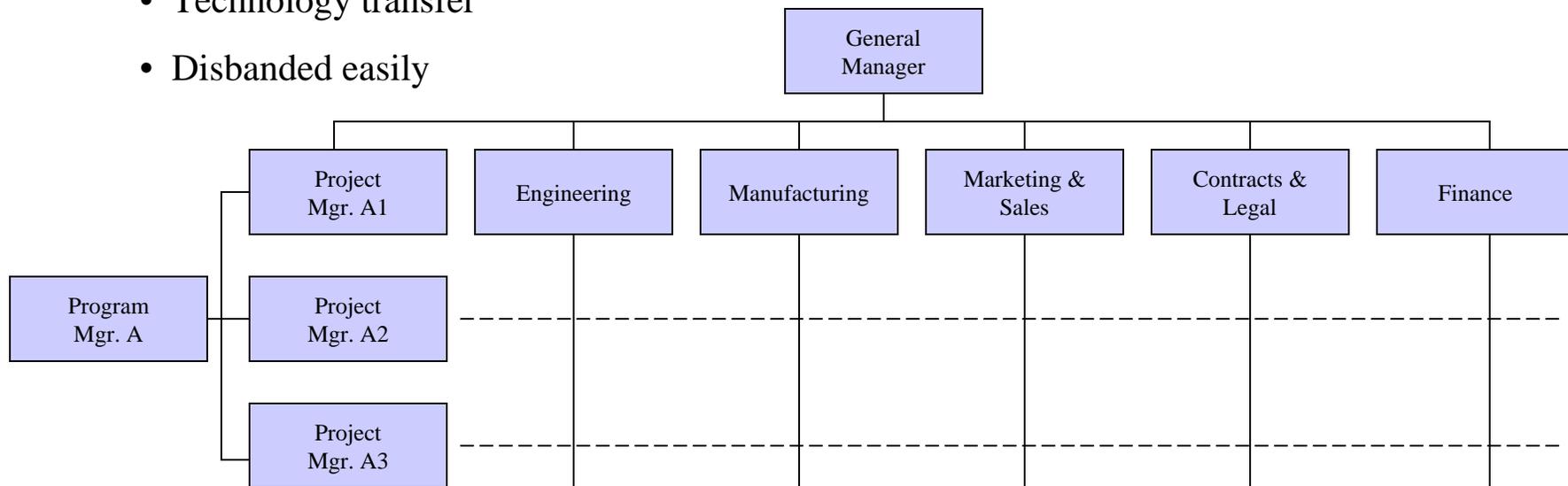
Conventional Matrix Organization

Strengths

- Single point of contact
- Clear Customer interface
- Quick response
- Reduced duplication
- Technology transfer
- Disbanded easily

Weaknesses

- High management skill required
- Competition of resources
- Management cooperation required
- Reduced employee recognition



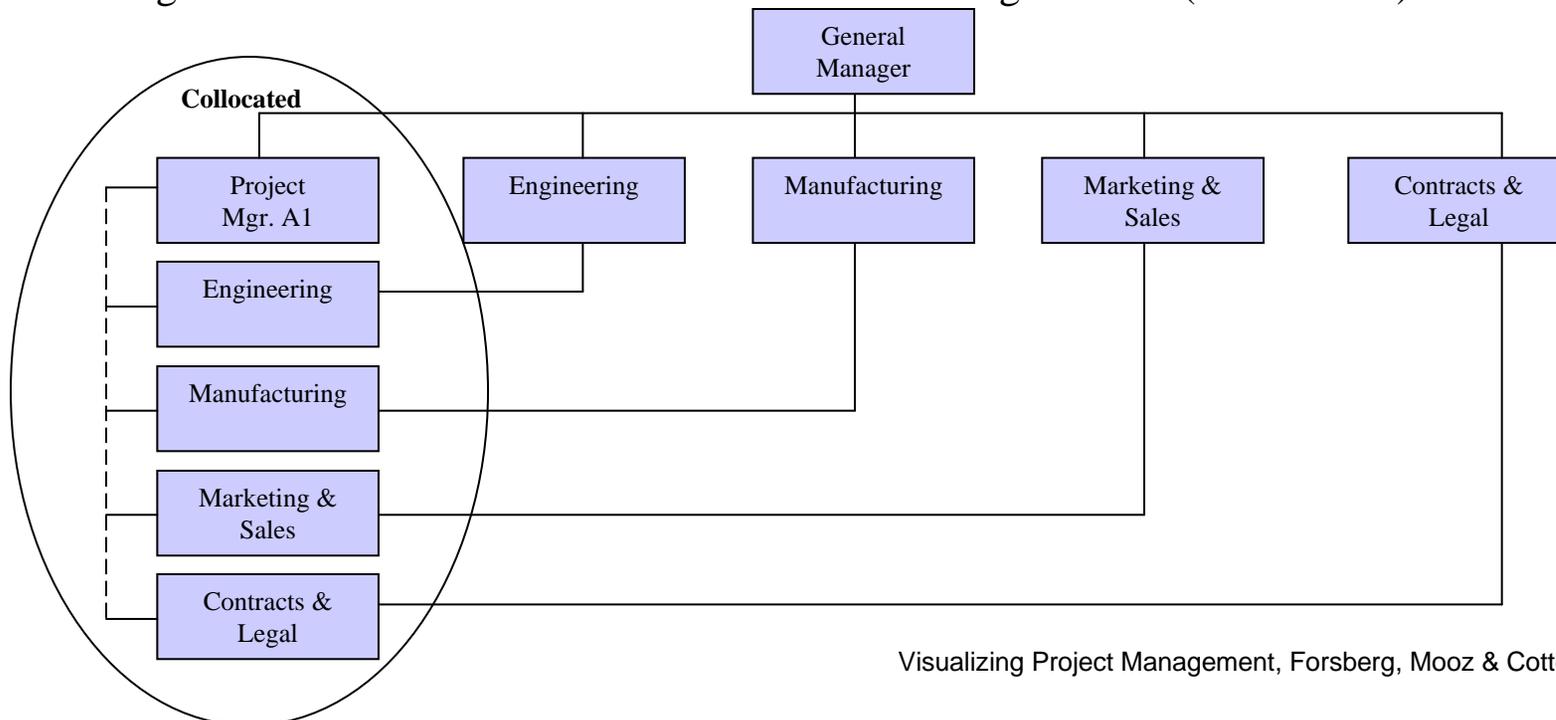
Collocated Matrix Organization

Strengths

- Single point accountability
- Clear customer interface
- Good control
- Single location
- High level of teamwork

Weaknesses

- Reduced technology awareness
- Reduced management support
- Reduced functional sharing
- Staffing irregularities
- Higher costs (Relocations)



Organization Options Summary

- Numerous possible organizational structures/designs
- No single-best solution for all situations
- Organizational structures must vary depending upon the size, complexity, and phase of the project cycle

Organizational Spectrum

