

Controls for the Explosion

Introduction

Projects are delivered by people who complete the myriad of actions required for project success. A significant portion of the project manager's time is spent controlling the project. Control is the course correcting for a project, bringing the project back on line with the plan and the schedule. The Project Manager ensures that the project will be delivered in the expected time frame, for the budgeted cost, with the required results. The Project Manager controls the project to keep all the packages and parcels of the project herded up, meeting the milestones at the time required. Controls ensure that the right packages are completed correctly at the right time.

Understand the components of controlling: •metrics, •measuring, •evaluating, and •resolving. Learn to plan controls for all aspects of the project system and the project methodology.

Classically, time, cost, and quality are said to be the controls. However, we can not control any of the three. They are simply yardsticks – metrics – for measuring where we are in the project. Metrics without any knobs for control! Time, cost, and quality can even be traps – projects that are on time, on budget, with the expected quality can be abysmal failures.

Know that Controlling is not fire fighting. Controlling does not replace planning. Develop the right controls for Result, Scope and Performance for each phase of the project.

Learning Outcome

Rigorously identify, plan and implement control mechanisms for your next project. Use the project methodology and the project system to identify requirements to control your projects.

Learning Objectives

- ◆ Understand managing has three components: Planning, Executing, and Controlling.
- ◆ Contrast Planning (preparing processes) to Executing (running processes to deliver results) to Controlling (ensuring expected deliverables in the scheduled time for the estimated effort).
- ◆ Compare metrics (what is measured) to measuring (the mechanism to measure) to comparing (using a map, a plan, a schedule) to evaluating (is there a variation and how is the variation changing) to correcting (the means to change the course or to return performance to the original course).
- ◆ Use many mechanisms for managing and control: metrics, measuring, personal observation, clear deliverables, determining progress, comparing to plan, comparing to schedule, meetings, look ahead scheduling, and timely problem resolution.
- ◆ Measure to control: Efficiencies – *Doing Things Right*, Effectiveness – *Doing the Right Things*, Efficacy – *Doing the Right Things Right at the Right time*, Reliability – *Doing what is Planned when it is Scheduled for the Effort Budgeted*.

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- ◆ Control Results, Scope, and Performance throughout the project methodoly: Create the Concept, Define Results and Success Criteria, Establish the Scope, Determine Deliverables, Plan Project Strategy, Plan Performance, Estimate Cost, Schedule Performance, Procure Resources, Detailing Methods, Execute Activities, Control Execution, Close and Celebrate.
- ◆ Use the fact based problem solving technique: Symptoms, Cause s, Solutions, Implementation.
- ◆ Ensure there are controls for each component of the project system (input, process, resources, methods, teams, metrics, leadership, management).
- ◆ Control Performance by measuring Progress (work completed), Time (durations and milestones), Effort (labor hours invested, earned, scheduled); Cost (budgeted, committed, expensed), Quality (the deliverable as specified), Reliability (variation, consistency, validity).
- ◆ How to control controls. Measures change behavior.

Outline

| Time | Duration | Activity | Outcome |
|-------|-------------|---|--|
| 8:00 | 40 minutes | Introduce workshop | Expectations Organize into small groups Everyone should bring a personal project |
| 8:40 | 45 minutes | Projects with Good Control and those with Poor Control | Discuss a project that had good Control and one that did not. Identify the attributes of each. |
| 9:25 | 45 minutes | Exercise One – <ul style="list-style-type: none"> • Management Process: Planning, Executing, Controlling. • Controlling Process: measuring, comparing, evaluating, correcting | Introduction – 3 minutes What is planning, executing, and controlling? What is metric, measuring, comparing, evaluating, correcting? Car trip (mph, miles, mpg speedometer, odometer, map, strip map, departure time, elapsed time, distance traveled, distance remaining, average speed, estimated arrival, cost per gallon)? |
| 10:10 | 10 minutes | Break | |
| 10:20 | 100 minutes | Exercise Two – STARTER <ul style="list-style-type: none"> • Controlling Results, Scope, Performance | Introduction – 5 minutes Debrief – 20 minutes What is the Result? What is the Scope? Is Scope Changing? Use an example from your world. What is the Required Performance? (Durations, Schedule, Labor Budgets, Quality Assurance) Are we Accomplishing the Scope? (Progress) Are we completing the scope in a timely manner? (Production) Are we completing the scope correctly? (Quality) What conclusions might we draw from these examples – 10 minutes |

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| Time | Duration | Activity | Outcome |
|-------|-------------|--|---|
| 12.00 | 45 minutes | LUNCH | |
| 12:45 | 75 minutes | Exercise Three – Application <ul style="list-style-type: none"> Controlling Results, Scope, Performance Application to Actual Project. Small groups will address one or more of these questions. | Introduction 3 minutes <ul style="list-style-type: none"> What is the Result? What are the processes, deliverables, and controls? Use an example from your world What is the Scope? Is Scope Changing? What are the processes, deliverables, and controls? Use an example from your world. What is the Required Performance? (Durations, Schedule, Labor Budgets, Quality Assurance) What are the processes, deliverables, and controls? Use an example from your world. Are we Accomplishing the Scope? (Progress) What are the metrics, measuring processes, and controls? Use an example from your world. Are we completing the scope in a timely manner? (Production) What are the processes, deliverables, and controls? Use an example from your world. Are we completing the scope correctly? (Quality) What are the processes, deliverables, and controls? Use an example from your world. What conclusions might we draw from these examples? 10 minutes |
| 2:00 | 10 minutes | Break | |
| 2:10 | 100 minutes | Exercise Four – STARTER Two <ul style="list-style-type: none"> Developing a control plan Actual, Scheduled, Earned | Introduction – 5 minutes Develop a plan to control Results, Scope, Performance Debrief – 20 minutes. What conclusions might we draw from these examples? 10 minutes |

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| Time | Duration | Activity | Outcome |
|------|------------|---|--|
| 3:50 | 60 minutes | Exercise Five – Measuring <ul style="list-style-type: none"> Ensuring Efficiency, Effectiveness, Efficacy, Reliability in Performance. Actual Examples. | Introduction – 4 minutes <ul style="list-style-type: none"> Are we working on the right scope pieces? Use an example from your world. Are we working correctly on the right scope pieces? Use an example from your world. Are we working on the right scope pieces correctly at the right time? Use an example from your world Are the processes reliable? Do we do what we say (plan and schedule) we will do when we say? Use an example from your world. What conclusions might we draw from these examples? 10 minutes |
| 4:50 | 10 min | Close Day | Each individual will share one learning from the day. |
| 8:00 | 20 min | Review Previous Day | Management Process Results, Scope, Performance Effectiveness, Efficiency, Efficacy, Reliability |
| 8:20 | 120 min | Exercise Six– INNOVATION <ul style="list-style-type: none"> Controls across the project methodology. Problem Solving Problem Resolution Variation due to waste, productivity, materials, methods, people, tools, information Corrective Action | Introduction – 10 minutes Plan the project process; plan controls (metric, measure, comparing, evaluating, correcting) for each phase of the design build simulation. Consider Results, Scope, and Performance as a way to organize controls in each of the areas of the Project Methodology. Use Problem Solving and Corrective Action to maintain or alter course. Debrief – 20 minutes What conclusions might we draw from these examples? 10 minutes |
| 9:30 | 10 minutes | Break | |

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| Time | Duration | Activity | Outcome |
|-------|-------------|--|--|
| 10:30 | 120 minutes | Exercise Seven – Application <ul style="list-style-type: none"> • Controls in the Project System | Introduction – 5 minutes The Project System has additional areas for planning controls. Plan Management for these areas organized by Processes, Deliverables, and Controls for a future project. Consider Contingent Corrective Action <ul style="list-style-type: none"> • Metrics • Leadership • Management • Team • Methods • Resources • Inputs Debrief 15 minutes What conclusions might we draw from these examples? 10 minutes |
| 12.00 | 45 minutes | LUNCH | |
| 1:15 | 120 minutes | Exercise Eight – Application to Actual Project <ul style="list-style-type: none"> • Selecting metrics • Critical Success Factors for Specific Projects | Introduction – 5 minutes Develop a management plan organized by Processes, Deliverables, and Controls for assigned phases of the project methodology for a real project. Develop contingent corrective actions. Develop a problem resolution process. Debrief – 30 minutes What conclusions might we draw from these examples? 10 minutes |
| 2:00 | 10 minutes | Break | |
| 3:25 | 50 minutes | Exercise Nine -- Commitment | Introduce 5 minutes Each team member will write commitments for their personal change to improve their project controls Write – 10 minutes Share with Small Group – 15 minutes Share with Large Group – 20 minutes |
| 4:15 | 30 minutes | Close Course | Certificates Evaluation |

The Project System

Input

Project Portfolio

- Prospect
- Mine
- Nuggets
- Dust
- Tailings

Management

- Planning
- Organizing
- Staffing
- Directing
- Controlling



Output

Satisfaction

- Owner
- User
- Team
- Suppliers
- Contractors
- Organization

Leadership

- Communication
- Vision
- Values
- Ethics
- Culture
- Recognition
- Rewards

Team

- Forming
- Decisions
- Goals
- Problem Solving
- Conflict
- Resolution
- Planning
- Maintenance
- Closing

Controls

- Results
- Scope
- Performance
- Risk
- Reliability
- Relationships
- Learning
- Time
- Cost
- Quality

Process

- Create the Concept and Criteria
- Define the Results and Criteria
- Establish the Scope
- Plan Requirements
- Estimate Effort
- Schedule Performance
- Procure Resources
- Execute Activities
- Evaluate Results
- Close & Celebrate

Resources

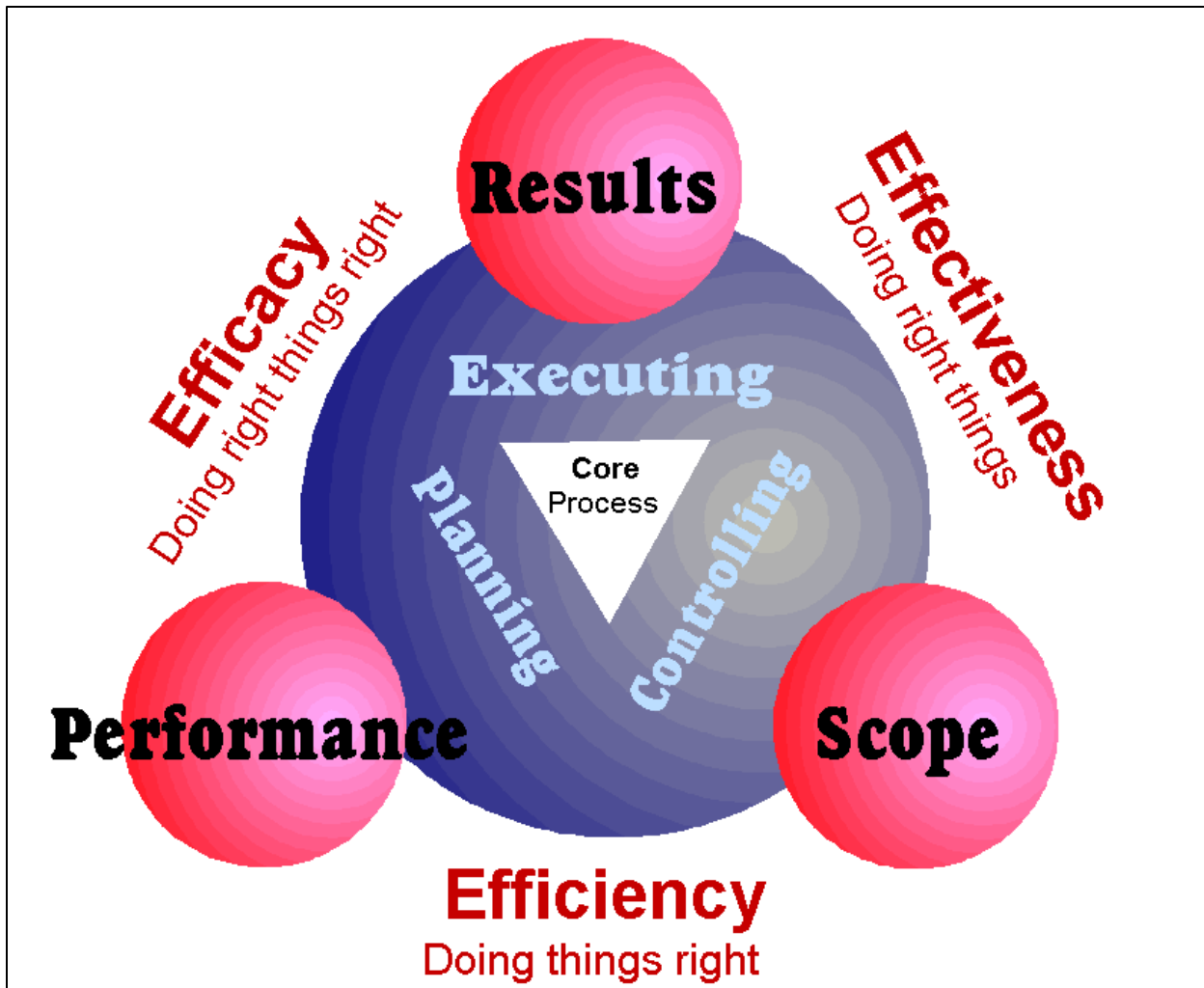
- Supervision
- People
- Tools & Equipment
- Materials
- Information
- Work Methods
- Money
- Time

Methods

- Options
- Selection
- Planned Effort
- Actual Effort Expended
- Planned Effort
- Estimated Effort to Finish
- Variations

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Controls for the Explosion



ProjectMAGIC® Methodology

| Project Phase | Create the Concept | Define Results and Success Criteria | Establish the Scope | Plan Requirements | Estimate Effort and Cost | Schedule Performance | Procure Resources | Execute Activities | Control Results | Close and Celebrate |
|------------------|---|---|--|--|---|---|--|--|---|---|
| Processes | Recognize Opportunity – vision, idea, pain, problem, need | Study Feasibility Launch Project Assess Business Risk Assess Project Risk – Result | Plan-to-Plan™ Identify Issues Define Scope Determine Deliverables Work Breakdown Structure Plan Project Strategy <ul style="list-style-type: none">• Project Goals• Project Phases• Plan for Project Planning• STORMSM – Strategy, Tactics, Operations, Resources, Methods• Project Management• Project Management Goals Assess Project Risk – Scope | Identify Operations – Time, Territory, People, Resource Develop Work Packages Select Methods Work / Task List Identify Resources <ul style="list-style-type: none">• Managers• People• Tools & Equipment• Materials• Information Assess Project Risk – Management and Methods | Calculate Effort for each Work Package Estimate Duration for each Work Package Calculate Resource Costs for each Work Package Assess Project Risk – Methods <ul style="list-style-type: none">• Productivity• Reliability Assess Project Risk – Effort and Cost | Sequence Activities Organize by Scheduling Technique Calculate Project Duration Level Resources Assess Project Risk – Project Duration | All Resources <ul style="list-style-type: none">• Purchasing• Contracting• Expediting• Receiving• Storing• Issuing• Deploying• Recovering• Salvage Assess Project Risk – Resources <ul style="list-style-type: none">• Availability• Delivery• Quantity• Quality• Productivity | Build the Team Administer Contracts Assure Quality Communicate Expedite Resources Searchlight Scheduling SM Perform Work Control Change Mitigate Risk | Measure <ul style="list-style-type: none">• Results• Scope• Performance• Risk• Reliability• Relationships• Learning• Time• Cost• Quality Evaluate <ul style="list-style-type: none">• Change• Magnitude of Change• Rate of Change• Change of Rate Correct Variances | Finalize Deliverables Turn Over to Customer Complete Documentation Celebrate Victory Learn <ul style="list-style-type: none">• Individuals• Team• Organization |
| | Deliverable | Business Purpose / Need | Refined Business Purpose / Need Impact on Business Critical Success Factors Project Mission Project Success Criteria Project Charter Result Risk | Scope Statement <ul style="list-style-type: none">• Assumptions• Threats• Opportunities• Decisions• Unknowns• Goals• Effort• Budget• Time• Team Scope Risk | Project Plan <ul style="list-style-type: none">• Work List• Project Management• Project Team• Project Schedule• Decisions• Change Management• Risk Management• Project Quality• Resource Management• Financial Plan• Relationships Management Risk Methods Risk | Work Packages <ul style="list-style-type: none">• Methods• Resources• Duration• Risk Assessment Consolidated Resource Requirements Work-Effort Budget Cost Budget Effort Risk Cost Risk | Schedule – Work-by-Time Milestones Cash Flow – Money-by-Time Effort Curve – Effort-by-Time Risk-by-Time Schedule Risk | Purchase Orders Contracts On-Time Delivery Committed Cost-by-Budget Expended Cost-by-Budget Resource Risk | Progress Customer Satisfaction Product Expected Results | Control Charts – Actual versus Planned Produce Required Result Meet Success Criteria |