**Project Management**

**eWorkbook**

**Worksheets**

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**5th Edition**

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**Baker, Dean A., 1945-**

***Project Management eWorkbook Worksheets* 5th edition**

**All worksheets are extracted from the *Project Management eWorkbook: For Classroom and Live Online Group Study 5th Edition*, by Dean A. Baker, ISBN: 978-0-9985172-3-0**

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**Table of Contents**

[**Worksheet Access and Use**](#B0) **. . . . . . iv**

[**1.0 Project Overview Worksheets**](#B1)**. . . . . . 1**

[**2.0 Cooperate Worksheets**](#B2)**. . . . . . . 15**

1. [**Communicate Worksheets**](#B3)**. . . . . . 25**
2. [**Coordinate Worksheets**](#B4)**. . . . . . . 45**
3. [**Control Worksheets**](#B5) **84**
4. [**Complete Worksheets**](#B6)**. . . . . . . 122**

[**7.0 Close Worksheets**](#B7) **. . . . 133**

**Worksheet Access and Use**

All worksheets in the *Project Management eWorkbook*. 5th edition (*PM eWorkbook*) can be printed or copied electronically as individual pdf documents with water marks to protect digital rights. The *Project Management Exercise Worksheets* 5th edition is provided as a free download to anyone that has purchased or is using the *PM eWorkbook*. in a course of study. This Word version of the worksheets provides a user-friendly editable worksheet free of watermarks. It also allows opening the *PM eWorkbook* to the instructions or data page, while the worksheet is opened in a second window beside it. This enables participants to see the instructions and data sheets while completing the worksheet.

For quick access, the table of contents provides bookmarks to each chapter and the first page of each chapter provides bookmarks to the individual worksheets. Place mouse on desired worksheet and hold the control button while left clicking to go to the selected worksheet.

**PDF Worksheet**: In a live classroom environment, students can print the PDF worksheet from the *PM eWorkbook* and complete the exercise using the hard copy. For the online environment and anyone using computers in the classroom, the PDF worksheet is loaded on a shared electronic whiteboard that allows everyone to annotate.

**Word Worksheet:** The *Project Management Exercise Worksheets* in a word file allows students with computers flexibility to fully edit rather than just annotate the worksheet using word for which they are more familiar. The student or instructor uses “Share Screen” to edit the document while collaborating with a team or the whole class.

**Google Doc Worksheet**: Most worksheets can be edited simultaneously by the entire team, when converted from Word to Google Docs for a more collaborative experience. To do this extract all the worksheets for a specific class session from the *Project Management Exercise Worksheets* and place in a word file with a unique name.Then upload, open, and save to Google docs. Ensure the file translated properly or make required corrections. Set up Edit privileges and Share the file with teammates. Topics 4.3 and 4.4 worksheets use a landscape format and must be in a separate file from the other google worksheets. Topics 5.2 and 5.3 do not translate and require creating original google docs worksheets.

**1.0 Project Overview Word Worksheet Bookmarks Table**

**Worksheet Bookmark Page**

[**1.1.1 Project Examples Worksheet**](#uyn8xjezk9pm)  **2**

[**1.1.2 Executive Involvement in Projects**](#9ehxkglcofso) **3**

[**1.1.3 Project Roles Crossword Puzzle**](#tql978ielpb2) **4**

[**1.1.4** **Project Management Benefits Worksheet**](#r2k8pku61oj) **5**

[**1.2.1 Process Groups and Knowledge Areas Worksheet**](#mnradugsswbe) **6**

[**1.3.1 Project Initiation Factors Worksheet**](#1exob0j915sh) **7**

[**1.3.2 Strategic Project Worksheet**](#vz8lej7k894l) **8**

[**1.4.1 Project Life Cycle Worksheet**](#ddvgstonhirl)  **9**

[**1.4.2 Tailoring the Life Cycle**](#uw4b2587zaox) **10**

[**1.5.1 Preliminary Project Selection Worksheet**](#g01dteewhi05) **11**

[**1.5.2 Business Case Financials Worksheet**](#acywcnrnj75a) **12**

**[1.5.3 Multi-criteria Decisions Worksheet](#6v89il4f5tj6)  14**

**1.1.1 Project Examples Worksheet**

In class give students time to answer the questions, then facilitate a discussion.

Online use this as a threaded discussion between class sessions.

**Why do individuals, groups, companies, and governments perform projects?**

**Project examples around the home**

**Project examples in your personal life**

**Project examples at work**

**1.1.2 Executive Involvement in Projects**

In class give students time to answer the questions, then facilitate a discussion.

Online use this as a threaded discussion between class sessions.

**How closely should an executive monitor a project?**

**What has been your experience with executives on your projects?**

**Does an executive need project management training?**

**1.1.3 Project Roles Crossword Puzzle**

**ACROSS**

1. A not-for-profit professional organization to advance project management.
2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_involves on going activities to sustain a business.

6. The organization that will use the product/service/result from the project

10. Persons or organizations actively involved or impacted by the project

11. Collection of all projects and programs within an enterprise

13. Projects usually involve progressive \_\_\_\_\_\_\_\_\_\_\_\_\_\_

14. External vendors that provide components/services to the project

**DOWN**

1. A Guide that establishes standard vocabulary for project management.

3. A Project creates a \_\_\_\_\_\_\_ product, service, or result.

4. Collection of related projects to meet specific company objectives

5. \_\_\_\_\_\_\_ managers carry out on going work and manage all tasks in their expertise

7. The people that directly utilize the project

8. An endeavor with specific beginning and end that creates a one of a kind result.

9. A Project's duration is \_\_\_\_\_\_\_\_\_\_\_\_\_.

10. The person that provides the financial resources and champions the project

12. They provide specialized expertise, participate, and share risk in a project.

15. Work group with specific knowledge and skills that carry out a project

**Note: Size letters at 14 point to distinguish from the numbers set at 10.**

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**1.1.4** **Project Management Benefits Worksheet**

**Team 1 - Project Management Benefits to Project Participants.**

**Team 2 - Project Management Benefits to the Project**

**Team 3 - Project Management Benefits to Participating Companies**

**1.2.1 Process Groups and Knowledge Areas Worksheet**

|  |  |  |
| --- | --- | --- |
| **Process Groups** | **Knowledge Areas** | |
| **Initiate** | **Integration** | **Resources** |
| **Plan** | **Scope** | **Communication** |
| **Execute** | **Schedule** | **Risk** |
| **Monitor & Control** | **Cost** | **Procurement** |
| **Close** | **Quality** | **Stakeholder Management** |

|  |  |  |
| --- | --- | --- |
| **Process Groups and Knowledge Areas Worksheet** | | |
| **Project Activity** | **Process Group** | **Knowledge Area** |
| Perform Quality Checks |  |  |
| Define Scope |  |  |
| Check Actual to Baseline costs |  |  |
| Identify Threats |  |  |
| Create Project Website |  |  |
| Sequence Activities |  |  |
| Create Charter |  |  |
| Lessons Learned Mtg. |  |  |
| Assemble Project Team |  |  |
| Final Project Report |  |  |
| Make Agreement w/suppliers |  |  |
| Identify Stakeholders |  |  |

**1.3.1 Project Initiation Factors Worksheet**

**Team 1 - Market Demand, Social Need, & Environmental Considerations**

**Team 2 - Business Need, Legal Requirements, & Economic Changes**

**Team 3 - Technology Advance, Customer Request, and Material Issues**

**1.3.2 Strategic Project Worksheet**

**Team 1 - GMI Strategic Criteria and Justification**

**Team 2 - HTMI Strategic Criteria and Justification**

**Team 3 - BCI Strategic Criteria and Justification**

**1.4.1 Project Life Cycle Worksheet**

Project Phases

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Bar Graph of Project Phases** | | | | | | | | | | | | | | | | | | | | |
| **Project Phase** | **Time Scale** | | | | | | | | | | | | | | | | | | | |
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**1.4.2 Tailoring the Life Cycle Worksheet**

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| --- | --- | --- | --- |
| **Life Cycle Tailoring** | | | |
| **Step 1** | **Step 2** | **Step 3** | **Step 4** |
| **Project**  **Phases** | **Activity Type**  **Unique or On Going** | **Consolidate or**  **Out of Scope** | **Final Team**  **Structure** |
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**1.5.1 Preliminary Project Selection Worksheet**

In class give students time to answer the questions, then facilitate a discussion.

Online use this as a threaded discussion between class sessions.

**Compare the Bakersfield New Tech Equipment and New Plant proposals.**

**List the advantages of the New Tech Equipment proposal:**

**Compare the Bakersfield New Tech Equipment and New Plant proposals.**

**List the advantages of the New Plant proposal:**

**Based on the preceding discussion regarding the advantages of the two proposals which option would you choose based on the current information?**

**1.5.2 Business Case Financials**

**Part A Project X Business Case Financials**

***Description:*** Project X is a capacity increase costing $10M & $20M respectively over 2 years. It is expected to add $10M/year to the company’s profit. The company uses a 5% discount rate.

**Compute Payback in Years (Show Calculations)**

**Compute ROI for year 5 (Show Calculations)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Project X - NPV Calculation Table** | | | | |
| **Year**  **(X)** | **Discount Rate 5%** | | **NPV @ 5%** | |
| **Cash Flow** | **1/(1+.05)x** | **Cash Flow** | **Cumm. NPV** |
| 0 |  | 1.0000 |  |  |
| 1 |  | 0.9524 |  |  |
| 2 |  | 0.9070 |  |  |
| 3 |  | 0.8639 |  |  |
| 4 |  | 0.8227 |  |  |
| 5 |  | 0.7835 |  |  |

Remember year zero and year 1 are negative numbers indicating money is being spent. Subsequent years are positive indicating money is coming in. However, the amount of money coming in decreases each year due to the time value of money in present day values.

**Part B Bakersfield Business Case Financials**

|  |  |  |  |
| --- | --- | --- | --- |
| **Business Case Financials Summary Worksheet (All $ Values in Millions)** | | | |
| **Parameter** | **Team 1**  **Hi Tech**  **Equipment** | **Team 2**  **New Plant**  **California** | **Team 3**  **Consolidated**  **Project** |
| **Project Cost** | **Yr 0 =$19, Yr 1 = $39** | **Yr 0 = $36, Yr 1 = $66** | **Yr 0 = $36, Yr 1 = $60** |
| **Project Duration Years** | **2** | **2** | **2** |
| **Proj. Related Profit/Yr.** | **$6** | **$16** | **$19** |
|  |  |  |  |
| **Payback in Years** |  |  |  |
| **ROI @ Year 8** |  |  |  |
| **NPV @ Year 8** |  |  |  |
| Note: GMI uses an 8% discounted cash flow in all their projects | | | |

**1.5.2 Business Case Financials (Continued)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Team 1 - NPV Calculation Table - Hi-Tech Equipment** | | | | |
| **Year**  **(X)** | **Discount Rate 8%** | | **NPV @ 8%** | |
| **Cash Flow** | **1/(1+.08)x** | **Cash Flow** | **Cumm. NPV** |
| 0 |  | 1.0000 |  |  |
| 1 |  | 0.9259 |  |  |
| 2 |  | 0.8573 |  |  |
| 3 |  | 0.7938 |  |  |
| 4 |  | 0.7350 |  |  |
| 5 |  | 0.6806 |  |  |
| 6 |  | 0.6302 |  |  |
| 7 |  | 0.5835 |  |  |
| 8 |  | 0.5403 |  |  |
| 9 |  | 0.5002 |  |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Team 2 - NPV Calculation Table - New Plant California** | | | | |
| **Year**  **(X)** | **Discount Rate 8%** | | **NPV @ 8%** | |
| **Cash Flow** | **1/(1+.08)x** | **Cash Flow** | **Cumm. NPV** |
| 0 |  | 1.0000 |  |  |
| 1 |  | 0.9259 |  |  |
| 2 |  | 0.8573 |  |  |
| 3 |  | 0.7938 |  |  |
| 4 |  | 0.7350 |  |  |
| 5 |  | 0.6806 |  |  |
| 6 |  | 0.6302 |  |  |
| 7 |  | 0.5835 |  |  |
| 8 |  | 0.5403 |  |  |
| 9 |  | 0.5002 |  |  |

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| **Team 3 - NPV Calculation Table – Consolidated Project** | | | | |
| **Year**  **(X)** | **Discount Rate 8%** | | **NPV @ 8%** | |
| **Cash Flow** | **1/(1+.08)x** | **Cash Flow** | **Cumm. NPV** |
| 0 |  | 1.0000 |  |  |
| 1 |  | 0.9259 |  |  |
| 2 |  | 0.8573 |  |  |
| 3 |  | 0.7938 |  |  |
| 4 |  | 0.7350 |  |  |
| 5 |  | 0.6806 |  |  |
| 6 |  | 0.6302 |  |  |
| 7 |  | 0.5835 |  |  |
| 8 |  | 0.5403 |  |  |
| 9 |  | 0.5002 |  |  |

**1.5.3 Multi-criteria Decisions**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Business Case Multicriteria Decision Making Worksheet** | | | | | | | | |
| **Parameter** | | **Score**  **Weight** | **Team 1**  **Hi Tech**  **Equipment** | | **Team 2**  **New Plant**  **California** | | **Team 3**  **Consolidated**  **Project** | |
| **Score**  **0 - 5** | **Wgtd.**  **Score** | **Score**  **0 - 5** | **Wgtd.**  **Score** | **Score**  **0 - 5** | **Wgtd.**  **Score** |
| **Strategic** | **Increase Sales 50%** |  |  |  |  |  |  |  |
| **Leadership MW/SE** |  |  |  |  |  |  |  |
| **1st NE / 2nd West** |  |  |  |  |  |  |  |
| **Increase Eff. 5%/Yr.** |  |  |  |  |  |  |  |
| **Presence Asia/Europe** |  |  |  |  |  |  |  |
| **Finance** | **Payback** |  |  |  |  |  |  |  |
| **ROI Year 8** |  |  |  |  |  |  |  |
| **NPV @ 8 Years** |  |  |  |  |  |  |  |
| **Balance** | **Available Funds** |  |  |  |  |  |  |  |
| **Available Manpower** |  |  |  |  |  |  |  |
| **Values & Culture** |  |  |  |  |  |  |  |
| **Risk Tolerance** |  |  |  |  |  |  |  |
| **Totals** | |  |  |  |  |  |  |  |

Hint 1: Total of the "score weights" should equal 1.0 or 100%

Hint 2: Weighted score for a parameter = Score weight x Score

**2.0 Cooperate Word Worksheet Bookmarks Table**

**Worksheet Bookmarks** **Page**

[**2.1.1 Personal History**](#evrvtbnq6zlu) **. . . . . . . 16**

[**2.1.2 Class Charter**](#gjxkobx0tgsj)**. . . . . . . . 17**

[**2.2.1 EEF and OPA Identification**](#hd6xnrf4dmrw) **. . . . . 18**

[**2.2.2 Organizational Structures**](#a8j5lbk915q1) **. . . . . 19**

[**2.2.3 Project Structures**](#714gk4aoc3mk) **. . . . . . 20**

[**2.3.1: Single Line Organization Chart**](#5baaork4abn3) **. . . . 21**

[**2.3.2: RACI Matrix**](#kh37siq6qb84) **. . . . . . . 22**

[**2.3.3: Situational Matrix**](#o2mcee281w9u) **. . . . . . 23**

[**2.3.4: Cooperation**](#2prdt42zce93) **. . . . . . . 24**

**2.1.1 Personal History Worksheets**

**Family**

**Education and Experience**

**Likes**

**Dislikes**

**2.1.2** **Class Charter Worksheet**

**Structure**

**Inter-personal**

**Communications**

**Attitude**

**2.2.1 EEF and OPA Factor Identification Worksheet**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **EEF and OPA Factor Identification** | | | | | |
|  | **Factors Impacting Projects** | **EEF** | | **OPA** | |
| **Internal** | **External** | **Knowledge**  **Base** | **Policies**  **Processes**  **Procedures** |
| **T**  **E**  **A**  **M**  **1** | 1. Political climate |  |  |  |  |
| 2. Process audits |  |  |  |  |
| 3. Time reporting |  |  |  |  |
| 4. Publications |  |  |  |  |
| 5. Equipment |  |  |  |  |
| 6. Subcontractors |  |  |  |  |
| 7. Prior project reports |  |  |  |  |
| 8. Video conferencing |  |  |  |  |
| 9. Metrics data |  |  |  |  |
| 10. Working Conditions |  |  |  |  |
| **T**  **E**  **A**  **M**  **2** | 11. Interest Rates |  |  |  |  |
| 12. Communication requirements |  |  |  |  |
| 13. Issue resolution data |  |  |  |  |
| 14. Factory locations |  |  |  |  |
| 15. Mission |  |  |  |  |
| 16. Competitors |  |  |  |  |
| 17. Report formats |  |  |  |  |
| 18. Risk categories |  |  |  |  |
| 19. Historical information |  |  |  |  |
| 20. Weather |  |  |  |  |
| **T**  **E**  **A**  **M**  **3** | 21. Accounting codes |  |  |  |  |
| 22. Std. contract provisions |  |  |  |  |
| 23. Change approval method |  |  |  |  |
| 24. Lessons learned |  |  |  |  |
| 25. Tariffs |  |  |  |  |
| 26. Local laws |  |  |  |  |
| 27. Human resource skills |  |  |  |  |
| 28. Leadership style |  |  |  |  |
| 29. Ethics |  |  |  |  |
| 30. Standardized estimating data |  |  |  |  |

**2.2.2 Organizational Structures Worksheet**

**Team 1 - Functional Organization**

**Advantages Disadvantages**

**Team 2 - Project Organization**

**Advantages Disadvantages**

**Team 3 - Matrix Organization**

**Advantages Disadvantages**

**2.2.3 Project Structure Worksheet**

In class give students time to answer the questions, then facilitate a discussion.

Online use this as a threaded discussion between class sessions.

**How is your company organized to handle projects?**

**Which structure best fits your organization?**

**What can a project manager do to be successful in each of these structures?**

**2.3.1** **Single Line Organization Chart Worksheet**

**Team 1 - GMI Single Line Org Chart**

**Team 2 - HTMI Single Line Org Chart**

**Team 3 - BCI Single Line Org Chart**

**2.3.2 Kitchen Project RACI Worksheet**

|  |  |  |  |  |  |  |  |  |  |  |  |
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| **A**  **S**  **S**  **I**  **G**  **N**  **M**  **E**  **N**  **T** | **KITCHEN**  **PROJECT** | | **PARTICIPANTS** | | | | | | | | |
| **P**  **R**  **O**  **J**  **E**  **C**  **T**  **M**  **G**  **R.** | **S**  **P**  **O**  **U**  **S**  **E** | **D**  **E**  **S**  **I**  **G**  **N**  **E**  **R** | **H**  **O**  **M**  **E**    **I**  **M**  **P**  **R**  **V.**    **C**  **T**  **R.** | **E**  **L**  **E**  **C**  **T**  **R**  **I**  **C**  **I**  **A**  **N** | **P**  **L**  **U**  **M**  **B**  **E**  **R** | **C**  **A**  **B**  **I**  **N**  **E**  **T**  **I**  **N**  **S**  **T.** | **C**  **A**  **R**  **P**  **E**  **N**  **T**  **E**  **R** | **T**  **I**  **L**  **E**  **I**  **N**  **S**  **T**  **A**  **L**  **L**  **E**  **R** |
| **ID** | **TASK** |
| **T**  **E**  **A**  **M**  **1** | 1 | Concept Design |  |  |  |  |  |  |  |  |  |
| 2 | Order Appliances |  |  |  |  |  |  |  |  |  |
| 3 | Layout Design |  |  |  |  |  |  |  |  |  |
| 4 | Order Cupboards |  |  |  |  |  |  |  |  |  |
| 5 | Electrical Design |  |  |  |  |  |  |  |  |  |
| 6 | Establish Contracts |  |  |  |  |  |  |  |  |  |
| 7 | Secure Permits |  |  |  |  |  |  |  |  |  |
| **T**  **E**  **A**  **M**  **2** | 8 | Deliver Materials Ordered |  |  |  |  |  |  |  |  |  |
| 9 | Remove Oven & Burners |  |  |  |  |  |  |  |  |  |
| 10 | Remove Sink |  |  |  |  |  |  |  |  |  |
| 11 | Remove cabinets, soffett, drywall |  |  |  |  |  |  |  |  |  |
| 12 | Rough Electrical |  |  |  |  |  |  |  |  |  |
| 13 | Rough Plumbing |  |  |  |  |  |  |  |  |  |
| 14 | Install New Drywall |  |  |  |  |  |  |  |  |  |
| **T**  **E**  **A**  **M**  **3** | 15 | Paint |  |  |  |  |  |  |  |  |  |
| 16 | Finish Electrical Outlets |  |  |  |  |  |  |  |  |  |
| 17 | Install cabinets |  |  |  |  |  |  |  |  |  |
| 18 | Install Sink w/disposal |  |  |  |  |  |  |  |  |  |
| 19 | Install Microwave |  |  |  |  |  |  |  |  |  |
| 20 | Install Floor Tile |  |  |  |  |  |  |  |  |  |
| 21 | Finish Paint |  |  |  |  |  |  |  |  |  |

**2.3.3 Situational Matrix**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Situational Matrix Chart** | | | | | |
| **ID** | **PROJECT SITUATION** | **Assignment** | | | |
| **Team 1** | **Team 2** | **Team 3** | **All Teams** |
| **GMI** | **HTMI** | **BCI** | **Type** |
| **1** | Improve project management process |  |  |  |  |
| **2** | Remedy escalated cost, delivery & performance variances |  |  |  |  |
| **3** | Approve macro schedules |  |  |  |  |
| **4** | Negotiate Purchase Order changes |  |  |  |  |
| **5** | Approve detail schedule changes |  |  |  |  |
| **6** | Remedy cost, delivery, & performance variances |  |  |  |  |
| **7** | Resolve technical disputes |  |  |  |  |
| **8** | Resolve operational issues |  |  |  |  |
| **9** | Resolve mechanical engr. issues |  |  |  |  |
| **10** | Resolve electrical engr. issues |  |  |  |  |
| **11** | Manage the site preparation process |  |  |  |  |
| **12** | Manage equipment Installation |  |  |  |  |
| **13** | Manage the start-up process |  |  |  |  |
| **14** | Manage the training process |  |  |  |  |
| **15** | Manage the equipment ramp up |  |  |  |  |
| **16** | Manage service support |  |  |  |  |
| **17** | Manage spare parts |  |  |  |  |

**2.3.4 Cooperation Worksheet**

In class give students time to answer the questions, then facilitate a discussion.

Online use this as a threaded discussion between class sessions.

**How do team norms, personal history exercise, matrix charts and responsibility charts improve project team cooperation?**

**2.4 Roles and Responsibilities in MPM (Slides 4-6)**

**What other techniques have you experienced that improved cooperation within groups?**

**When in the project life cycle is the best time to implement these techniques? Explain your answer.**

**3.0 Communicate Word Worksheet Bookmarks Table**

**Worksheet Bookmark Page**

[**3.1.1 Communication Channels**](#kp8xlpq3qd0e) **. . . . . 26**

[**3.1.2 Brainstorm (See Affinity Diagram)**](#dati20pavixa) **. . . . 27**

[**3.1.3 Affinity Diagram**](#dati20pavixa) **. . . . . . 27**

[**3.2.1 Project Charter**](#jdwkf1nye4g0) **. . . . . . 28**

[**3.2.2 Project Management Plan Components**](#bvwk0hqbwkfy)  **. . 29**

[**3.3.1 Facilitation**](#lpicmdbac63r) **. . . . . . . 31**

[**3.3.2 Context Diagram**](#gnk4rulp94uh) **. . . . . . 32**

[**3.3.3 Scope Statement**](#hfug4r2pr8ga) **. . . . . 33**

[**3.4.1 Meeting Agendas**](#apznt320ucbt) **. . . . . . 34**

[**3.4.2 Meeting Effectiveness**](#d6suiyjzwrvi) **. . . . . . 35**

[**3.4.3 Video Conference Call**](#y4clo1iiwwhm) **. . . . . . 36**

[**3.4.4 Meeting and Video Conference**](#pflrj8kv8pd7) **. . . 37**

[**3.4.5 Project Website**](#k95bidqi93ve) **. . . . . . 38**

[**3.5.1 Communication Conflict**](#kp9mp0k9t6x8) **. . . . . 39**

[**3.5.2 Communication Elements/Examples**](#td3hffg43egn) **. . . . 40**

[**3.5.3 Social Media Communications**](#6umb7b8b9zp0)  **. . . 41**

[**3.6.1 Request for Quote**](#ahw02vo6bj4n) **. . . . . . 42**

[**3.6.2 Contract Types**](#ws362)  **. . . . . . 43**

[**3.6.3 Equipment Acquisition Process**](#nk5gvz4466c9) **. . . 44**

**3.1.1 Communication Channels Worksheet**

**Team 1 -** You manage a project team with seven other participants. Two months into the project two individuals are added to the team. How many additional communication channels were created? (Show calculations)

**Team 2 -** You have assembled a leadership team made up of yourself, your sponsor, and the purchasing agent from your company along with three other companies that are each providing a project manager, sponsor, and sales representative. How many communication channels exist in the Leadership team? (Show calculations)

**Team 3 -** The project steering committee including yourself has five members and you have created a design team with six engineers and an implementation team of eight technicians. How many communication channels among the steering committee, design team and implementation team? (Show calculations)

**3.1.3 Affinity Diagram Worksheet**

Group - \_\_\_\_\_\_\_\_\_\_\_

Group - \_\_\_\_\_\_\_\_\_\_\_

Group - \_\_\_\_\_\_\_\_\_\_\_

Group - \_\_\_\_\_\_\_\_\_\_\_

Group - \_\_\_\_\_\_\_\_\_\_\_

Group - \_\_\_\_\_\_\_\_\_\_\_

**3.2.1 Project Charter Worksheet**

|  |  |  |  |
| --- | --- | --- | --- |
| **Project Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** | | | |
| **Mission**  (Purpose or  Justification) | |  | |
| **Goals**  (Objectives) | |  | |
| **Scope**  (Project  Description) | |  | |
| **Summary Milestone Schedule** | |  | |
| **Summary Budget** | |  | |
|  | | | |
| **User Acceptance Criteria/Quality** | | |  |
|  | | | |
| **Major Risks** |  | | |

**3.2.2 Project Management Plan Components Worksheet 1**

**Team 1 –** Describe project change management in the Bakersfield Project.

**Team 2 -** Describe project configuration management in the Bakersfield Project.

**Team 3 -** Describe the performance measurement baseline in the Bakersfield Project.

**3.2.2 Project Management Plan Components Worksheet 2**

|  |  |  |
| --- | --- | --- |
| **Project Documents** | | |
| **#** | **Document** | **Checkmark or name of similar document** |
| 1 | Activity Attributes |  |
| 2 | Activity list |  |
| 3 | Assumption Log |  |
| 4 | Basis of Estimates |  |
| 5 | Change Log |  |
| 6 | Cost Estimates |  |
| 7 | Cost Forecasts |  |
| 8 | Duration Estimates |  |
| 9 | Issue Log |  |
| 10 | Lessons Learned Register |  |
| 11 | Milestone list |  |
| 12 | Physical resource Assignments |  |
| 13 | Project Calendars |  |
| 14 | Project Communications |  |
| 15 | Project Schedule |  |
| 16 | Project Schedule Network Diagram |  |
| 17 | Project Scope Statement |  |
| 18 | Project Team Assignments |  |
| 19 | Quality Control Measurements |  |
| 20 | Quality Metrics |  |
| 21 | Quality Report |  |
| 22 | Requirements Documentation |  |
| 23 | Requirements Traceability Matrix |  |
| 24 | Resource Breakdown Structure |  |
| 25 | Resource Calendars |  |
| 26 | Resource Requirements |  |
| 27 | Risk Register |  |
| 28 | Risk Report |  |
| 29 | Schedule Data |  |
| 30 | Schedule Forecasts |  |
| 31 | Stakeholder Register |  |
| 32 | Team Charter |  |
| 33 | Test and Evaluation Documents |  |

**3.3.1 Facilitation Worksheet**

In class give students time to answer the questions, then facilitate a discussion.

Online use this as a threaded discussion between class sessions.

**Joint Application Design (JAD) and Quality Function Deployment (QFD) are two facilitation techniques used in collecting requirements. Name other facilitation opportunities over the entire project.**

**What experience have you had with facilitation meetings related to projects?**

**Beyond the stated purpose of the facilitation meeting did the process strengthen relationships among the participants? Explain your answer.**

**3.3.2 Context Diagram Worksheet**

**3.3.3 Scope Statement Worksheet**

|  |  |
| --- | --- |
| **Project Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Project Phase \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** | |
| **Scope**  (Project Description in more detail) |  |
| **Acceptance**  **Criteria** (Greater Detail) |  |
| **Deliverables** (Includes Ancillary Items) |  |
| **Exclusions** (Items out of Scope) |  |
| **Constraints** (Schedule, Cost, and Others) |  |
|  | |

**3.4.1 Meeting Agendas Worksheet**

Meeting Type: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Meeting Location: \_\_\_\_\_\_\_\_\_\_\_\_

Team Identity: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Meeting Time: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Meeting Participants: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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Subject Presenter/Facilitator

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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**3.4.2 Meeting Effectiveness Worksheet Team \_\_\_**

Meeting Type: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Team Identity: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Leader: \_\_\_\_\_\_\_\_\_\_\_\_\_**

Responsibilities: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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Tasks: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Recorder: \_\_\_\_\_\_\_\_\_\_\_\_\_**

Responsibilities: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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Tasks: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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**Participant:**

Responsibilities: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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Tasks: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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**3.4.3 Video Conference Call Worksheet**

**Hardware & Skype or other call set up (Team 3)**

**Pre-Call Planning (Team 1)**

**Conduct & Manage Conference Call (Team 2)**

**After Call Activities (Team 3)**

**3.4.4 Meetings and Video Conference Worksheet**

In class give students time to answer the questions, then facilitate a discussion.

Online use this as a threaded discussion between class sessions.

**What value does the agenda add to a meeting?**

**What experience have you had with meeting minutes that were never made or late? What was the result?**

**What’s your experience with video calls? What do you like? What do you dislike?**

**3.4.5 Project Website Worksheet**

**All Teams - General Site Content**

**Team 1 - Leadership Content**

**Team 2 - Engineering Content**

**Team 3 - Construction Content**

**Team 4 - Start Up Content**

**3.5.1 Communication Conflict Worksheet**

**Team 1 - What communication errors did Klaus make?**

**Team 2 - What should Diane do when she gets the call from Janet?**

**Team 3 - What more should James do regarding this call and Klaus attitude?**

**3.5.2 Communication Elements/Examples Worksheet**

**Team 1 - Project Verbal Communications**

**Team 2 - Project Written Communications**

**Team 3 - Communication Methods and Media**

**3.5.3 Social Media Communications Worksheet**

In class give students time to answer the questions, then facilitate a discussion.

Online use this as a threaded discussion between class sessions.

**How might Twitter, Facebook, or other social media facilitate Project Communications?**

**Cite experiences in your work or professional life where communications failed?**

**How might these communication failures have been avoided?**

**3.6.1 Request for Quote (RFQ)**

Team \_\_\_ Skilled Work being quoted: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Owner Information and Instructions Provided with RFQ**

**Contractor Responsibilities**

**Contractor Deliverables**

**3.6.2 Contract Type Worksheet**

|  |  |  |
| --- | --- | --- |
| **Contract Type Characteristics and Risk** | | |
| **Type** | **Characteristics** | **Risk Owner** |
| **FFP** |  |  |
| **FP-EPA** |  |  |
| **FPIF** |  |  |
| **CPFF** |  |  |
| **CPIF** |  |  |
| **CPAF** |  |  |
| **T&M** |  |  |

|  |  |  |
| --- | --- | --- |
| **Contract Risks in Bakersfield Project** | | |
| **Company Pair** | **Contract Type** | **Contract Type Decision Logic** |
|  |  | **Team 1 Low Risk to GMI** |
| GMI/BCI |  |  |
|  |
|  |
|  |
| GMI/HTMI |  |  |
|  |
|  |
|  |
|  |  | **Team 2 – Low Risk to BCI and HTMI** |
| GMI/BCI |  |  |
|  |
|  |
|  |
| GMI/HTMI |  |  |
|  |
|  |
|  |
|  |  | **Team 3 - Best for Cooperation and Overall Success** |
| GMI/BCI |  |  |
|  |
|  |
|  |
| GMI/HTMI |  |  |
|  |
|  |
|  |

**3.6.3 Equipment Acquisition Process (EAP) Worksheet**

**Equipment Acquisition Process Agenda**

**Team: \_\_\_\_\_ Meeting Type: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Meeting Purpose: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**GMI Participants: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Meeting Agenda**

**Time: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ & Location \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Topic Presenter/Facilitator**

**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\***

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

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**4.0 Coordinate Word Worksheet Bookmarks Table**

**Worksheet Bookmark Page**

[**4.1.1 Stakeholder Classification Worksheet**](#miu9lp3o9i8p) **47**

[**4.1.2 Stakeholder Engagement Assessment Worksheet**](#izpbqulat1a0) **48**

[**4.1.3 Action Planning Issue Log**](#yxpzczqe3euf) **49**

[**4.2.1 Create Wagon WBS Worksheet**](#f8dijya5cwb9) **50**

[**4.2.2 Kitchen Replacement WBS Worksheet**](#r2dr16uiw537) **51**

[**4.3.1 Network Diagram**](#ghaefqnv8afn)  **52**

[**4.3.2 PDM Networks Team 1**](#7ws8eg3ogfig) **53**

[**4.3.2 PDM Networks Team 2**](#gknf92pco1lz) **54**

[**4.3.2 PDM Networks Team 3**](#sihxgb84f8hs)  **55**

[**4.3.3 Kitchen Replacement Network Team 1**](#155tvzh853nq)  **56**

[**4.3.3 Kitchen Replacement Network Team 2**](#e4rhx77u0484) **57**

[**4.3.3 Kitchen Replacement Network Team 3**](#3ltqvuoigluu) **58**

[**4.4.1 Duration Estimates Worksheet**](#gol54v22gvq3) **59**

[**4.4.2 Estimating Techniques**](#7hc7jzjmfyv9)  **60**

[**4.4.3 Kitchen Repl. Network & Bar Chart Team 1**](#4io3n08iu63d) **61**

[**4.4.3 Kitchen Repl. Network & Bar Chart Team 2**](#u0f8m8au1fy7) **63**

[**4.4.3 Kitchen Repl. Network & Bar Chart Team 3**](#s2u0zgw7ntl2) **65**

[**4.4.3 Kitchen Repl. Paths & Timing Summary**](#otqtaeafuztb) **67**

[**4.4.4 Milestones**](#il20vklpu5j0) **68**

[**4.5.1 Resource Smoothing and Leveling Worksheet**](#z3roj6ahq3y2) **69**

[**4.5.2 Kitchen Repl. Ex. 4.4.3 Bar Chart Team 1**](#tg5nwncxtmhq) **70**

[**4.5.2 Kitchen Repl. Ex. 4.4.3 Bar Chart Team 2**](#58cqzfrpo8l0) **71**

**4.0 Coordinate Word Worksheet Bookmarks Table Continued**

**Worksheet Bookmark Page**

[**4.5.2 Kitchen Repl. Ex. 4.4.3 Bar Chart Team 3**](#hu9zoqovhtn7) **72**

[**4.5.2 Kitchen Repl. Leveling Solution Worksheet**](#64itdrp1yfcm) **73**

[**4.6.1 Estimating Accuracy Worksheet**](#mh0p8v5ordux) **74**

[**4.6.2 Kitchen Repl. Budget Table Team 1 Worksheet**](#bxuxz08zz1d3) **75**

[**4.6.2 Kitchen Repl. Budget Table Team 2 Worksheet**](#eiprysyetf8k) **76**

[**4.6.2 Kitchen Repl. Budget Table Team 3 Worksheet**](#d20v4psltnt6) **77**

[**4.6.2 Kitchen Repl. Budget Solution Worksheet**](#4vpytm2jgkde)  **78**

[**4.7.1 Team Assignment**](#nh87ohyqrqsu) **79**

[**4.7.2 Staff Selection Worksheet**](#eolzemg6vp1p) **80**

[**4.8.1 Team Formation**](#y34oocu8giy4) **81**

[**4.8.2 Team Development Stages Worksheet**](#byxjt8l12hpn) **82**

[**4.8.3 Effective Team Characteristics Worksheet**](#suv5nhrglp4e) **83**

**4.1.1 Stakeholder Classification Worksheet**

Use ID letter to place individuals assigned to your team on the Power/Interest and Influence/Impact grids and explain your logic.

Grid color coding: Red - Manage Closely Yellow - Keep Satisfied

Grey - Keep Informed Green - Monitor

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Bakersfield Project** | | |  | **POWER/INTEREST GRID** | | | | | | | | | | | | |
|  | **ID** | **Name/Co./Position** |  | **HIGH** | | | | | | | | | | | | |
| **T** | A | H. Morris/GMI/CEO | **P**  **O**  **W**  **E**  **R** |  |  |  |  |  |  |  | |  |  | |  |
| **E** | B | D. Mills/GMI/Dir Purch |  |  |  |  |  |  |  | |  |  | |  |
| **A** | C | C. Helmet/HTMI/Mfg Mgr |  |  |  |  |  |  |  | |  |  | |  |
| **m** | D | T. Wadsworth/BCI/VP Constr |  |  |  |  |  |  |  | |  |  | |  |
| **1** | E | c. Atlas/BCI/CFO |  |  |  |  |  |  |  | |  |  | |  |
| **T** | F | V. Clark/GMI/VP Oper |  |  |  |  |  |  |  | |  |  | |  |
| **E** | G | J. Willy/GMI/Dir Engr |  |  |  |  |  |  |  | |  |  | |  |
| **A** | H | C. Englehof/HTMI/CEO |  |  |  |  |  |  |  | |  |  | |  |
| **M** | I | A.Wennberg/HTMI/VP Plan |  |  |  |  |  |  |  | |  |  | |  |
| **2** | J | Architech/BCI/Contract |  |  |  |  |  |  |  | |  |  | |  |
| **T** | K | A. Rost/GMI/M&E Buyer | **LOW** | | | | | | | | **INTEREST** | | | **HIGH** | |
| **E** | L | P. Smith/GMI/CFO |  | | | | | | | | | | | | |
| **A** | M | J. Muller/HTMI/VP Engr |
| **M** | N | K. Jansen/HTMI/Training | **INFLUENCE/IMPACT GRID** | | | | | | | | | | | | |
| **3** | O | A. Dodd/BCI/CEO | **HIGH** | | | | | | | | | | | | |
|  | | | **I**  **N**  **F**  **L**  **U**  **E**  **N**  **C**  **E** |  |  |  |  |  |  |  | |  |  | |  |
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| **LOW** | | | | | | | | **IMPACT** | | | **HIGH** | |

**4.1.2 Stakeholder Engagement Assessment Worksheet**

In the matrix “C” designates the current level of engagement by the individual.

Identify the desired level of engagement with a “D” and indicate the resulting gap as follows:

Red = C is two or more columns behind D

Yellow = C is one column behind D

Green = C is same column or ahead of D

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Stakeholder Engagement Assessment Matrix** | | | | | | | |
| # | **Stakeholder Company-Position** | **Unaware** | **Aware** | | | | **Engagement** |
| **Resistant** | **Neutral** | **Supportive** | **Leading** | **Gap R-Y-G** |
| 1 | Harvey Morris  GMI-CEO |  |  |  | **C** |  |  |
| 2 | Victor Clark  GMI-VP Oper |  |  |  | **C** |  |  |
| 3 | John Willy  GMI-Dir Engr |  | **C** |  |  |  |  |
| 4 | Dan Mills  GMI-Dir Purch |  |  | **C** |  |  |  |
| 5 | Tom Walworth  BCI-VP Constr |  |  |  |  | **C** |  |
| 6 | Carol Atlas  BCI-CFO |  |  | **C** |  |  |  |
| 7 | Curt Helmut  HTMI-Mfg Mgr | **C** |  |  |  |  |  |
| 8 | James Muller  HTMI-VP Engr |  | **C** |  |  |  |  |

**4.1.3 Action Planning Worksheet**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Stakeholder Engagement Action Planning** | | | | | | |
|  | **#** | **Issue** | **Owner** | **Action** | **Date** | **Status** |
| **T**  **E**  **A**  **M**  **1** | 1 | Information needed for permits? |  |  |  |  |
| 2 | Liability during construction? |  |  |  |  |
| 3 | On time delivery appliances &  cabinets? |  |  |  |  |
| **T**  **E**  **A**  **M**  **2** | 4 | What work  must be contracted? |  |  |  |  |
| 5 | Will design double countertop area? |  |  |  |  |
| 6 | Containing construction dirt/dust? |  |  |  |  |
| **T**  **E**  **A**  **M**  **3** | 7 | Can all work be completed in 4 weeks? |  |  |  |  |
| 8 | Will tear out expose problems? |  |  |  |  |
| 9 | Is general contractor needed? |  |  |  |  |

**4.2.1 Wagon Work Breakdown Structure Worksheet**

Identify the level 1 elements based on major subcomponents of the Wagon. Label the elements in level 1 boxes and connect boxes to the wagon assy. Next identify elements for each of the level 1 components, label level 2 boxes, and connect to respective level 1 box. Next identify elements of level 2 components, label level 3 boxes, and connect to respective level 2 box. Add or resize boxes as needed and eliminate unused boxes.

Wagon ASSY

**LEVEL 0**

**LEVEL 1**

**LEVEL 2**

**LEVEL 3**

**4.2.2 Kitchen Replacement WBS Worksheet**

**Team 1 - Project Phase \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Team 2 - Project Phase \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Team 3 - Project Phase** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**4.3.1 Network Diagram**

**A**

**B**

**C**

**D**

**E**

**F**

**G**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Task ID** | **A** | **B** | **C** | **D** | **E** | **F** | **G** |
| **Pred. ID** |  |  | **A, B** | **B** | **A** | **C, D** | **E, F** |

**4.3.2 PDM Networks Team 1**

**A**

**B**

**C**

**D**

**E**

**F**

**G**

**H**

**I**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Task ID** | **A** | **B** | **C** | **D** | **E** | **F** | **G** | **H** | **I** |
| **Pred. ID** |  |  | **A** | **A** | **B** | **B** | **D, E** | **C** | **F, G, H** |

**4.3.2 PDM Networks Team 2**

**A**

**B**

**C**

**D**

**E**

**F**

**G**

**H**

**I**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Task ID** | **A** | **B** | **C** | **D** | **E** | **F** | **G** | **H** | **I** |
| **Pred. ID** |  | **A** | **A** | **A** | **B** | **B** | **B** | **C, D** | **E, F, G, H** |

**4.3.2 PDM Networks Team 3**

**A**

**B**

**C**

**D**

**E**

**F**

**G**

**H**

**I**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Task ID** | **A** | **B** | **C** | **D** | **E** | **F** | **G** | **H** | **I** |
| **Pred. ID** |  |  |  | **A, B** | **B, C** | **D, E** | **E** | **A** | **H** |

**4.3.3 Kitchen Replacement Network Team 1**

**Concept Design**

**Order Appliances**

**Layout Design**

**Ord. Floor Tile, Sink, & Disposal**

**Electrical Design**

**Order Cupboards & Countertop**

**Order Electrical Fixtures**

**Contract**

**Tile Install**

**Contract Cupboard Install**

**Contract Plumb, Carp., Elec.**

**Secure Required Permits**

**Deliver Required Materials**

**4.3.3 Kitchen Replacement Network Team 2**

**Disc. & Remove Countertop Burners**

**Disc. & Remove Sink & Faucets**

**Disc. & Remove Oven**

**Remove Countertop**

**Remove Upper Cabinets**

**Remove Lower Cabinets**

**Remove Soffit**

**Remove Drywall behind Cabinets**

**Remove Floor Tile**

**Rough In Electrical**

**Rough In Plumbing**

**Install New Drywall**

**Paint**

**4.3.3 Kitchen Replacement Network Team 3**

**Finish Electrical Outlets**

**Install Upper Cabinet**

**Install Lower Cabinets**

**Install Countertop**

**Install Sink & Disposal**

**Install Dishwasher**

**Install Ceiling Light & Fan**

**Install Microwave**

**Install New Floor Tile**

**Install Stove**

**Finish Trim**

**Paint Trim & Touch Up**

**4.4.1 Duration Estimates Worksheet**

In class, give students time to answer the questions, then facilitate a discussion.

Online use this as a threaded discussion between class sessions.

**When you asked, how long will it take to do a task? How do you arrive at your answer?**

**Do you ever add in extra time? Why?**

**What are the consequences of being under or over your estimate?**

**4.4.2 Estimating Techniques Worksheet**

**Team 1 – Topic 4.4 Duration and Milestones Practice Problem 1 on page 167** **of Project Management eWorkbook**

List any assumptions you make regarding this problem and show all calculations

**Team 2 – Topic 4.4 Duration and Milestones Practice Problem 2 on page 167 of Project Management eWorkbook**

List any assumptions you make regarding this problem and show all calculations

**Team 3 – Topic 4.4 Duration and Milestones Practice Problem 3 on page 167 of Project Management eWorkbook**

List any assumptions you make regarding this problem and show all calculations

**4.4.3 Kitchen Repl. Network & Bar Chart Team 1**

**2.) Concept Design**

**[5 days]**

**3.) Order Appliances**

**[5 Days]**

**4.) Layout Design**

**[1 Day]**

**5.) Order Tile, Sink, & Disposal**

**[2 Days]**

**7.) Electrical Design**

**[2 Days]**

**6.) Order Cupbds & Countertop**

**[1 Day]**

**8.) Order Electrical Fixtures**

**[2 Days]**

**10.) Contract Tile Install**

**[3 Days]**

**9.) Contract Cupboard Inst. [3 Days]**

**11.) Contract Plumb, Carp., Elec.[5 Days]**

**12.) Secure Req. Permits**

**[8 Days]**

**13.) Deliver Required Materials**

**[24 Days]**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Task ID** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | **13** |
| **Pred. ID** |  | **2** | **2** | **4** | **4** | **4** | **7** | **6** | **5** | **4, 5, 7** | **9, 10, 11** | **3, 5, 6, 8** |

**4.4.3 Kitchen Repl. Network & Bar Chart Team 1 (Continued)**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Design Procure Phase Bar Chart** | | | | | | | | | | | | | | | | | | | | |
| **ID** | **Task Name** | **Predecessor** | **Dur** | **Working Days** | | | | | | | | | | | | | | | | |
| **Days** | **2** | **4** | **6** | **8** | **10** | **12** | **14** | **16** | **18** | **20** | **22** | **24** | **26** | **28** | **30** | **32** | **34** |
| **2** | **Design**  **Concept** |  | **5** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **3** | **Order Appliances** | **2** | **5** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **4** | **Design**  **Layout** | **2** | **1** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **5** | **Ord. Tile, Sink, Disposal** | **4** | **2** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **6** | **Order Cabinets & Countertop** | **4** | **1** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **7** | **Design**  **Electrical** | **4** | **2** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **8** | **Order Elect. Fixtures** | **7** | **2** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **9** | **Contract Cab. Install** | **6** | **3** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **10** | **Contract Tile Install** | **5** | **3** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **11** | **Contract Carp. Elec., Plumb.** | **4,5,7** | **5** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **12** | **Secure**  **Permits** | **9,10,11** | **8** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **13** | **Deliver Materials** | **3,5,6,8** | **24** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

**4.4.3 Kitchen Repl. Network & Bar Chart Timing Team 2**

**3.) Disc. & Remove Burners**

**[2 Days]**

**4.) Remove Sink/Fauc.**

**[1 Day]**

**5.) Disc. & Rem. Oven**

**[1 Day]**

**6.) Remove Countertop**

**[1 Day]**

**8.) Remove Upper Cab.**

**[1 Day]**

**7.) Remove Lower Cab.**

**[2 Days]**

**9.) Remove Soffit [1 Day]**

**10.) Remove Drywall behind Cab. [1 Day]**

**11.) Rem. Flr Tile [1 Day]**

**12.) Rough Elect[2 Days]**

**13.) Rough Plumb[1 Day]**

**14.) Install Drywall**

**[1 Day]**

**15.) Paint**

**[1 Day]**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Task ID** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | **13** | **14** | **15** |
| **Pred. ID** |  |  |  | **3, 4** | **6** | **5** | **8** | **7, 9** | **7, 9** | **10** | **10** | **11, 12, 13** | **14** |

**4.4.3 Kitchen Repl. Network & Bar Chart Team 2 (Continued)**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Tear Out & Prep Phase Bar Chart** | | | | | | | | | | | | | | | | | | | | |
| **ID** | **Task Name** | **Predecessor** | **Dur** | **Working Days** | | | | | | | | | | | | | | | | |
| **Days** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | **13** | **14** | **15** | **16** | **17** |
| **3** | **Disc. & remove Burners** |  | **2** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **4** | **Disc. & remove Sink/Faucets** |  | **1** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **5** | **Disc. & remove Oven** |  | **1** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **6** | **Remove Countertop** | **3,4** | **1** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **7** | **Remove Lower Cabinets** | **6** | **2** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **8** | **Remove Upper Cabinets** | **5** | **1** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **9** | **Remove**  **Soffett** | **8** | **1** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **10** | **Remove**  **Drywall** | **7,9** | **1** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **11** | **Remove Floor Tile** | **7,9** | **1** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **12** | **Rough In Electrical** | **10** | **2** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **13** | **Rough In Plumbing** | **10** | **1** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **14** | **Install new Drywall** | **11,12,13** | **1** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **15** | **Paint** | **14** | **1** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

**4.4.3 Kitchen Repl. Network & Bar Chart Team 3**

**4.) Finish Elec.[1 Day]**

**5.) Install Upper Cab.**

**[2 Days]**

**6.) Inst. Lwr Cab. [1Day]**

**7.) Install Countertop**

**[1 Day]**

**8.) Install Sink/Disp [1 Day]**

**9.) Install Dishwasher**

**[2 Days]**

**10.) Inst Light & Fan [1 Day]**

**11.) Install Microwave**

**[2 Days]**

**12.) Install New Floor Tile [1 Day]**

**13.) Install Stove**

**[1 Day]**

**14.) Finish Trim [2 days]**

**15.) Paint & Touch Up**

**[1 Day]**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Task ID** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | **13** | **14** | **15** |
| **Pred. ID** |  | **4** | **4** | **6** | **7** | **7** | **5** | **5** | **8, 9** | **12** | **12** | **10, 11, 13, 14** |

**4.4.3 Kitchen Repl. Network & Bar Chart Team 3 (Continued)**

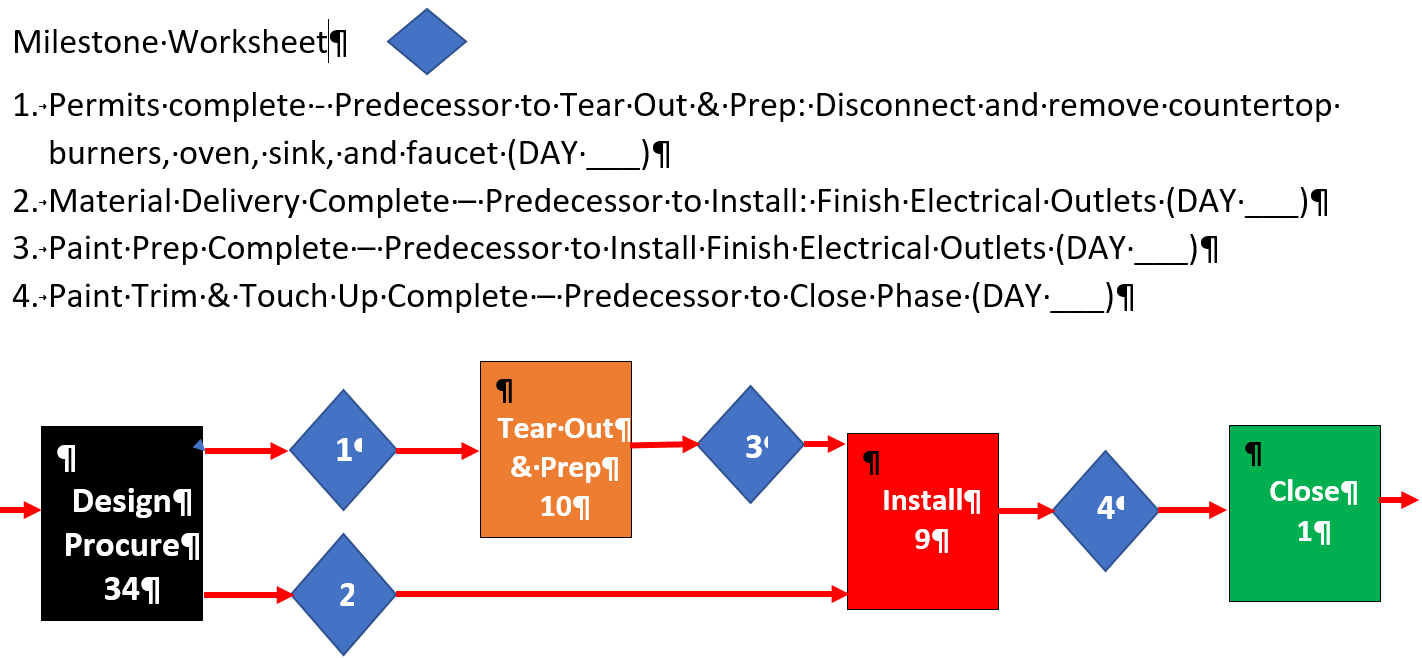
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Install Phase Bar Chart** | | | | | | | | | | | | | | | | | | | | |
| **ID** | **Task Name** | **Predecessor.** | **Dur** | **Working Days** | | | | | | | | | | | | | | | | |
| **Days** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | **13** | **14** | **15** | **16** | **17** |
| **4** | **Finish Elec Outlets** |  | **1** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **5** | **Install Upper Cabinets** | **4** | **2** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **6** | **Install Lower Cabinets** | **4** | **1** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **7** | **Install Countertop** | **6** | **1** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **8** | **Install Sink w/Disposal** | **7** | **1** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **9** | **Install Dishwasher** | **7** | **2** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **10** | **Install Ceiling Light** | **5** | **1** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **11** | **Install Microwave** | **5** | **2** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **12** | **Install Floor**  **Tile** | **8,9** | **1** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **13** | **Install Stove** | **12** | **1** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **14** | **Finish Trim** | **12** | **2** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **15** | **Paint Trim & Touch Up** | **10,11,13,14** | **1** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

**4.4.3 Kitchen Repl. Paths & Timing Summary Worksheets**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **KRP Network Paths Table** | | | | | | |
| **Path** | **Team 1** | | **Team 2** | | **Team 3** | |
| **Description** | **Time**  **(Days)** | **Description** | **Time**  **(Days)** | **Description** | **Time**  **(Days)** |
| **A** |  |  |  |  |  |  |
| **B** |  |  |  |  |  |  |
| **C** |  |  |  |  |  |  |
| **D** |  |  |  |  |  |  |
| **E** |  |  |  |  |  |  |
| **F** |  |  |  |  |  |  |
| **G** |  |  |  |  |  |  |
| **H** |  |  |  |  |  |  |
| **I** |  |  |  |  |  |  |
| **J** |  |  |  |  |  |  |

|  |  |
| --- | --- |
| **KRP Timing Solutions Table** | |
| **Phase/Milestone Event** | **Days to Complete** |
| **Permits Complete** |  |
| **Material Delivery Complete** |  |
| **Design/Procure Complete** |  |
| **Tear Out Prep Complete** |  |
| **Install Complete** |  |
| **Project Close Complete** |  |

**4.4.4 Milestones Worksheet**



**4.5.1 Resource Smoothing and Leveling Worksheet**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Resource Smoothing Problem** | | | | | | | | | |
| **Task** | **Wk 1** | **Wk 2** | **Wk 3** | **Wk 4** | **Wk 5** | **Wk 6** | **Wk 7** | **Wk 8** | **Wk 9** |
| **A** | **2** | **2** | **2** |  |  |  |  |  |  |
| **B** |  |  | **3** | **3** | **3** |  |  |  |  |
| **C** |  |  |  | **4** | **4** | **4** |  |  |  |
| **D** |  | **1** | **1** | **1** |  |  |  |  |  |
| **E** |  | **1** | **1** | **1** | **1** | **1** |  |  |  |
| **Total** | **2** | **4** | **7** | **9** | **8** | **5** |  |  |  |
|  | | | | | | | | | |
| **Resource Smoothing Solution** | | | | | | | | | |
| **Task** | **Wk 1** | **Wk 2** | **Wk 3** | **Wk 4** | **Wk 5** | **Wk 6** | **Wk 7** | **Wk 8** | **Wk 9** |
| **A** |  |  |  |  |  |  |  |  |  |
| **B** |  |  |  |  |  |  |  |  |  |
| **C** |  |  |  |  |  |  |  |  |  |
| **D** |  |  |  |  |  |  |  |  |  |
| **E** |  |  |  |  |  |  |  |  |  |
| **Total** |  |  |  |  |  |  |  |  |  |
|  | | | | | | | | | |
| **Resource Leveling Problem** | | | | | | | | | |
| **Task** | **Wk 1** | **Wk 2** | **Wk 3** | **Wk 4** | **Wk 5** | **Wk 6** | **Wk 7** | **Wk 8** | **Wk 9** |
| **A** | **2** | **2** | **2** |  |  |  |  |  |  |
| **B** |  |  | **3** | **3** | **3** |  |  |  |  |
| **C** |  |  |  | **4** | **4** | **4** |  |  |  |
| **D** |  | **1** | **1** | **1** |  |  |  |  |  |
| **E** |  | **1** | **1** | **1** | **1** | **1** |  |  |  |
| **Total** | **2** | **4** | **7** | **9** | **8** | **5** |  |  |  |
|  | | | | | | | | | |
| **Resource Leveling @ 4 Workers Solution** | | | | | | | | | |
| **Task** | **Wk 1** | **Wk 2** | **Wk 3** | **Wk 4** | **Wk 5** | **Wk 6** | **Wk 7** | **Wk 8** | **Wk 9** |
| **A** |  |  |  |  |  |  |  |  |  |
| **B** |  |  |  |  |  |  |  |  |  |
| **C** |  |  |  |  |  |  |  |  |  |
| **D** |  |  |  |  |  |  |  |  |  |
| **E** |  |  |  |  |  |  |  |  |  |
| **Total** |  |  |  |  |  |  |  |  |  |

**4.5.2 Kitchen Repl. Ex. 4.4.3 Bar Chart Team 1**

Use the bar charts solutions from exercise 4.4.3 and add a column for resources or repeat the data on the following chart. Then enter the resource initials for each activity identified by the exercise data sheets in the resource column. Any two activities using the same resource on the same day are considered over allocated for both activities and counted as two occurrences. Identify the resources which are overallocated and the total number of occurrences and record your team info in the solution worksheet following these charts.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Design Procure Phase Bar Chart** | | | | | | | | | | | | | | | | | | | |  | | |
| **ID** | **Task Name** | **Pred.** | **Dur** | **Working Days** | | | | | | | | | | | | | | | | | | **Res.**  **Initials** |
| **Days** | **2** | **4** | **6** | **8** | **10** | **12** | **14** | **16** | **18** | **20** | **22** | **24** | **26** | **28** | **30** | **32** | | **34** |
| **2** | **Design**  **Concept** |  | **5** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |
| **3** | **Order Appliances** | **2** | **5** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |
| **4** | **Design**  **Layout** | **2** | **1** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |
| **5** | **Ord. Tile, Sink, Disposal** | **4** | **2** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |
| **6** | **Order Cabinets & Countertop** | **4** | **1** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |
| **7** | **Design**  **Electrical** | **4** | **2** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |
| **8** | **Order Elect. Fixtures** | **7** | **2** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |
| **9** | **Contract Cab. Install** | **6** | **3** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |
| **10** | **Contract Tile Install** | **5** | **3** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |
| **11** | **Contract Carp. Elec., Plumb.** | **4,5,7** | **5** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |
| **12** | **Secure**  **Permits** | **9,10,11** | **8** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |
| **13** | **Deliver Materials** | **3,5,6,8** | **24** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |

**4.5.2 Kitchen Repl. Ex. 4.4.3 Bar Chart Team 2**

Use the bar charts solutions from exercise 4.4.3 and add a column for resources or repeat the data on the following chart. Then enter the resource initials for each activity identified by the exercise data sheets in the last column on the right. Any two activities using the same resource on the same day are considered over allocated for both activities and counted as two occurrences. Identify the resources which are overallocated and the total number of occurrences and record your team info in the solution worksheet following these charts.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Tear Out Prep Phase Bar Chart** | | | | | | | | | | | | | | | | | | | | | |
| **ID** | **Task Name** | **Pred.** | **Dur.**  **Days** | **Working Days** | | | | | | | | | | | | | | | | | **Res.**  **Initials.** |
| **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | **13** | **14** | **15** | **16** | **17** |
| **3** | **Disc. & remove Burners** |  | **2** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **4** | **Disc. & remove SinkFaucet** |  | **1** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **5** | **Disc. & remove Oven** |  | **1** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **6** | **Remove Countertop** | **3,4** | **1** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **7** | **Remove Lower Cabinets** | **6** | **2** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **8** | **Remove Upper Cabinets** | **5** | **1** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **9** | **Remove**  **Soffett** | **8** | **1** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **10** | **Remove**  **Drywall** | **7,9** | **1** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **11** | **Remove FloorTile** | **7,9** | **1** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **12** | **Rough In Electrical** | **10** | **2** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **13** | **Rough In Plumbing** | **10** | **1** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **14** | **Install new Drywall** | **11,12,13** | **1** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **15** | **Paint** | **14** | **1** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

**4.5.2 Kitchen Repl. Ex. 4.4.3 Bar Chart Team 3**

Use the bar charts solutions from exercise 4.4.3 and add a column for resources or repeat the data on the following chart. Then enter the resource initials for each activity identified by the exercise data sheets in the last column on the right. Any two activities using the same resource on the same day are considered over allocated for both activities and counted as two occurrences. Identify the resources which are overallocated and the total number of occurrences and record your team info in the solution worksheet following these charts.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Install Phase Bar Chart** | | | | | | | | | | | | | | | | | | | | | |
| **ID** | **Task Name** | **Pred..** | **Dur** | **Working Days** | | | | | | | | | | | | | | | | | **Res.**  **Initials** |
| **Days** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | **13** | **14** | **15** | **16** | **17** |
| **4** | **Finish Elec Outlets** |  | **1** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **5** | **Install Upper Cabinets** | **4** | **2** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **6** | **Install Lower Cabinets** | **4** | **1** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **7** | **Install Countertop** | **6** | **1** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **8** | **Install Sink w/Disposal** | **7** | **1** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **9** | **Install Dishwasher** | **7** | **2** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **10** | **Install Ceiling Light** | **5** | **1** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **11** | **Install**  **Microwave** | **5** | **2** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **12** | **Install Floor**  **Tile** | **8,9** | **1** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **13** | **Install Stove** | **12** | **1** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **14** | **Finish Trim** | **12** | **2** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **15** | **Paint Trim & Touch Up** | **10,11,13, 14** | **1** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

**4.5.2 Kitchen Repl. Leveling Solution Worksheet**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Kitchen Project Leveling Solution Table** | | | | |
| **Status** | **Parameter** | **Design & Procure** | **Tear Out & Prep** | **Install** |
| **Original Plan** | **Over allocated Resources** |  |  |  |
| **Over allocated Occurrences** |  |  |  |
| **Days to Complete** |  |  |  |
| **After Smoothing** | **Over allocated Resources** |  |  |  |
| **Over allocated Occurrences** |  |  |  |
| **Days to Complete** |  |  |  |
| **After Leveling** | **Over allocated Resources** |  |  |  |
| **Over allocated Occurrences** |  |  |  |
| **Days to Complete** |  |  |  |

**4.6.1 Estimating Accuracy Worksheet**

|  |  |  |  |
| --- | --- | --- | --- |
| **Estimate Accuracy Corrective Action** | | | |
| **Team** | **Item** | **Bad Estimate Root Cause** | **Corrective Action** |
| **1** | **1** | **Missing scope items** |  |
| **2** | **Wrong Equipment** |  |
| **3** | **Improper Estimating Method** |  |
| **2** | **4** | **Poorly Defined WBS** |  |
| **5** | **No Allowance for Inflation** |  |
| **6** | **Wrong Material/Quantity** |  |
| **3** | **7** | **Inadequate Risk Allowances** |  |
| **8** | **Too Optimistic** |  |
| **9** | **Wrong Human Skills/Quantity** |  |

**4.6.2 Kitchen Repl. Budget Team 1 Worksheet**

From the data table in the exercise instructions fill out the rate/hr. and fixed columns. Multiple rate/hour X 8 hrs./day X duration in days to get variable cost. Add variable and fixed cost to get total for each activity, then sum the variable, fixed and total columns. Enter the totals in the Budget Solution table following these charts.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Design Procure Budget Table Worksheet** | | | | | | | | |
| **ID** | **Task Name** | **Dur.** | **Res.** | **Rate/Hr.** | **Rate/Day** | **Var.** | **Fixed** | **Total** |
| **2** | **Design**  **Concept** | **5** | PM |  |  |  |  |  |
| **3** | **Order Appliances** | **5** | SP |  |  |  |  |  |
| **4** | **Design**  **Layout** | **1** | DE |  |  |  |  |  |
| **5** | **Ord. Tile, Sink, Disposal** | **2** | SP |  |  |  |  |  |
| **6** | **Order Cabinets & Countertop** | **1** | SP |  |  |  |  |  |
| **7** | **Design**  **Electrical** | **2** | DE |  |  |  |  |  |
| **8** | **Order Elect. Fixtures** | **2** | SP |  |  |  |  |  |
| **9** | **Contract Cab. Install** | **3** | PM |  |  |  |  |  |
| **10** | **Contract Tile Install** | **3** | PM |  |  |  |  |  |
| **11** | **Contract Carp. Elec., Plumb.** | **5** | PM |  |  |  |  |  |
| **12** | **Secure**  **Permits** | **8** | PM |  |  |  |  |  |
| **13** | **Deliver**  **Materials** | **24** | LO |  |  |  |  |  |

**4.6.2 Kitchen Repl. Budget Team 2 Worksheet**

From the data table in the exercise instructions fill out the rate/hr. and fixed columns. Multiple rate/hour X 8 hrs./day X duration in days to get variable cost. Add variable and fixed cost to get total for each activity, then sum the variable, fixed and total columns. Enter the totals in the Budget Solution table following these charts.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Tear Out & Prep Budget Table Worksheet** | | | | | | | | |
| **ID** | **Task Name** | **Dur.** | **Res.** | **Rate/Hr.** | **Rate/Day** | **Var.** | **Fixed** | **Total** |
| 3 | **Disc & remove Burners** | **2** | EL |  |  |  |  |  |
| 4 | **Disc & Remove sink/faucet** | **1** | PB |  |  |  |  |  |
| 5 | **Disc & remove oven** | **1** | EL |  |  |  |  |  |
| 6 | **Remove countertop** | **1** | CP |  |  |  |  |  |
| 7 | **Remove lwr Cabinets** | **2** | CP |  |  |  |  |  |
| 8 | **Remove Upper Cabinets** | **1** | CP |  |  |  |  |  |
| 9 | **Remove**  **soffit** | **1** | CP |  |  |  |  |  |
| 10 | **Remove**  **drywall** | **1** | CP |  |  |  |  |  |
| 11 | **Remove floor tile** | **1** | CP |  |  |  |  |  |
| 12 | **Rough In**  **Elec** | **2** | EL |  |  |  |  |  |
| 13 | **Rough In Plumbing** | **1** | PB |  |  |  |  |  |
| 14 | **Install new Drywall** | **1** | CP |  |  |  |  |  |
| 15 | **Paint** | **1** | PM |  |  |  |  |  |

**4.6.2 Kitchen Repl. Budget Team 3 Worksheet**

From the data table in the exercise instructions fill out the rate/hr. and fixed columns. Multiple rate/hour X 8 hrs./day X duration in days to get variable cost. Add variable and fixed cost to get total for each activity, then sum the variable, fixed and total columns. Enter the totals in the Budget Solution table following these charts.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Install Budget Table Worksheet** | | | | | | | | |
| **ID** | **Task Name** | **Dur.** | **Res.** | **Rate/Hr.** | **Rate/Day** | **Var.** | **Fixed** | **Total** |
| 4 | **Finish Electrical Outlets** | **1** | EL |  |  |  |  |  |
| 5 | **Install Upper Cabinets** | **2** | CI |  |  |  |  |  |
| 6 | **Install Lower Cabinets** | **1** | CI |  |  |  |  |  |
| 7 | **Install Countertop** | **1** | CI |  |  |  |  |  |
| 8 | **Install Sink w/disposal** | **1** | PB |  |  |  |  |  |
| 9 | **Install Dishwasher** | **2** | PB |  |  |  |  |  |
| 10 | **Install Ceiling Light w/fan** | **1** | EL |  |  |  |  |  |
| 11 | **Install Microwave** | **2** | EL |  |  |  |  |  |
| 12 | **Install new Floor Tile** | **1** | TI |  |  |  |  |  |
| 13 | **Install**  **Stove** | **1** | EL |  |  |  |  |  |
| 14 | **Finish**  **Trim** | **2** | CP |  |  |  |  |  |
| 15 | **Paint Trim & Touch Up** | **1** | PM |  |  |  |  |  |

**4.6.2 Kitchen Repl. Budget Solution Worksheet**

|  |  |  |  |
| --- | --- | --- | --- |
| **Kitchen Repl. Budget Solution Table** | | | |
| **Project Phase** | **Variable Cost** | **Fixed Cost** | **Total Cost** |
| **Design/Procure** |  |  |  |
| **Tear Out/Prep** |  |  |  |
| **Install** |  |  |  |
| **Close** |  |  |  |
| **Total Project** |  |  |  |

**4.7.1 Team Assignment**

|  |  |  |
| --- | --- | --- |
| **Company** | **Project Participants** | |
| **Leadership - Team 1** | **Engineering – Team 2** |
| **GMI** |  |  |
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|  |  |
|  |  |
|  |  |
| **HTMI** |  |  |
|  |  |
|  |  |
|  |  |
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| **BCI** |  |  |
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|  |  |
|  |  |
| **Contract** |  |  |
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|  |  |  |
| --- | --- | --- |
| **Company** | **Project Participants** | |
| **Construction – Team 3** | **Plant Start Up Team 3** |
| **GMI** |  |  |
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|  |  |
|  |  |
| **HTMI** |  |  |
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| **BCI** |  |  |
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|  |  |
|  |  |
|  |  |
| **Contract** |  |  |
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**4.7.2 Staff Selection Worksheet**

|  |  |  |
| --- | --- | --- |
| **Team 1 – Project Engineer** | | |
| **Selection Criteria** | **Weight** | **Logic** |
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| **Team 2 – Project Scheduler** | | |
| **Selection Criteria** | **Weight** | **Logic** |
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| --- | --- | --- |
| **Team 3 – Financial Analyst** | | |
| **Selection Criteria** | **Weight** | **Logic** |
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**4.8.1 Team Formation Worksheet for Team \_\_\_**

Agenda for a **(Identify Team Type)** Team Formation Meeting

Deliverables from \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Team Formation Meeting

**Deliverables from \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Team Formation Meeting**

**4.8.2 Team Development Stages Worksheet**

In class give students time to answer the questions, then facilitate a discussion.

Online use this as a threaded discussion between class sessions.

**What is the stage of team development after the team formation event in the previous exercise?**

**In your experiences with teams did you see these stages and can you give some examples?**

**How long did each stage take and did they repeat?**

**4.8.3 Effective Team Characteristics Worksheet**

**Barriers to Effective Teams**

**Ideas to Mitigate Barriers**

**5.0 Control Word Worksheet Bookmarks Table**

**Worksheet Bookmark Page**

[**5.1.1 Project Control Worksheet**](#ws511p) **86**

[**5.2.1 Forward and Reverse Pass Network/Table – Class**](#ws521p)  **. . 87**

[**5.2.2 Kitchen Repl. Critical Path Network/Table – Team 1**](#ws522t1p) **. 88**

[**5.2.2 Kitchen Repl. Critical Path Network/Table – Team 2**](#ws522t2p) **. 89**

[**5.2.2 Kitchen Repl. Critical Path Network/Table – Team 3**](#ws522t3p) **. 90**

[**5.2.3 Burn Down Chart Class Worksheet**](#ws523p) **91**

[**5.3.1 Crash Cost Worksheet**](#ws531p)  **92**

[**5.3.2 Schedule Recovery Worksheet**](#ws532p) **93**

[**5.3.3 Schedule Improvement Worksheet**](#ws533p) **94**

[**5.4.1 Earned Value Case A Example Worksheet**](#ws541p) **95**

[**5.4.2 Earned Value Case B Team 1 Worksheet**](#ws542t1p) **96**

[**5.4.2 Earned Value Case C Team 2 Worksheet**](#ws542t2p) **97**

[**5.4.2 Earned Value Case D Team 3 Worksheet**](#tl3b8n5ftjtj) **98**

[**5.4.2 Causes for Earned Value Performance Table**](#6ncuz54ksj8x) **99**

[**5.4.3 Forecasting Case A Example Worksheet**](#zbb6ujq0j8c6) **100**

[**5.4.4 Forecast Solutions Graphing & Probability Worksheet**](#ws544Solp) **101**

[**5.4.4 Forecasting Team 1 Worksheet**](#kohvw1hh4wox) **102**

[**5.4.4 Forecasting Team 2 Worksheet**](#ws544t2p) **103**

[**5.4.4 Forecasting Team 3 Worksheet**](#s32x5w71ds35) **104**

[**5.4.5 Performance Trends**](#2lgjh3q241ef) **105**

[**5.5.1 Change Control Process Worksheet Team**](#cxvj1intor4u) **106**

[**5.5.2 Change Control Implementation Team 1**](#5oa8c643xi4v) **107**

**Table of Worksheet Bookmarks Continued**

**Worksheet Bookmark Page**

[**5.5.2 Change Control Implementation Team 2**](#kclwnlf7bmzf) **108**

[**5.5.2 Change Control Implementation Team 3**](#pemmx93wo2hf)  **109**

[**5.5.2 PM Plan Components and Documents affected by change**](#ws552compp) **110**

[**5.6.1 Quality Benefits Worksheet**](#hjexjtufwkba)  **111**

[**5.6.2 Quality Metrics Part A**](#nin5nc8imvqo)  **112**

[**5.6.2 Quality Metrics Part B**](#ws562Bp) **113**

[**5.6.3 Project Deliverables**](#ws563p) **Certification 114**

[**5.6.4 Project Quality Situations Worksheet**](#ws564p) **115**

[**5.7.1 Conflict Reduction Worksheet**](#ws571p) **116**

[**5.7.2 Personality Conflict Worksheet**](#ws572p) **117**

[**5.7.3 Project Scorecard**](#ws573p) **118**

[**5.8.1 Risk Identification Worksheet**](#ws581p) **119**

[**5.8.2 Risk Strategy and Register Worksheets**](#ws582p) **120**

[**5.8.3 Risk Management Worksheet**](#ws583p) **121**

**5.1.1 Project Control Worksheet**







**5.2.1 Forward and Reverse Pass Network – Class Worksheet**

Double click on an activity box to enter values in the excel table

**Early Start**

**Early Finish**

**Float**



**Activity**

**Late Finish**

**Late Start**

**Time**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Forward & Reverse Pass Table - Class Worksheet** | | | | | | | | |
| **Activity** | **Pred.** | **Time** | **Earliest** | | **Latest** | | **Float** | **Critical**  **Path** |
| **ES** | **EF** | **LS** | **LF** |
| **A** | **-** | **2** |  |  |  |  |  |  |
| **B** | **-** | **4** |  |  |  |  |  |  |
| **C** | **A, B** | **1** |  |  |  |  |  |  |
| **D** | **C** | **3** |  |  |  |  |  |  |
| **E** | **C** | **2** |  |  |  |  |  |  |

**5.2.2 Forward and Reverse Pass Network – Team 1 Worksheet**

Double click on an activity box to enter ES, EF, LS, & LF values in the excel table

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Forward & Reverse Pass Table - Class Worksheet** | | | | | | | | |
| **ID** | **Activity** | **Pred.** | **Time** | **Earliest** | | **Latest** | | **Float** | **Critical**  **Path** |
| **ES** | **EF** | **LS** | **LF** |
| **2** | Concept Design | **-** | **5** |  |  |  |  |  |  |
| **3** | Order Appliances | **2** | **5** |  |  |  |  |  |  |
| **4** | Layout Design | **2** | **1** |  |  |  |  |  |  |
| **5** | Order Floor., Sink, Disposal | **4** | **2** |  |  |  |  |  |  |
| **6** | Order Cupboard/Top | **4** | **1** |  |  |  |  |  |  |
| **7** | Electrical Design | **4** | **2** |  |  |  |  |  |  |
| **8** | Order Elec. Fixtures | **7** | **2** |  |  |  |  |  |  |
| **9** | Contract Cupboard. Install | **6** | **3** |  |  |  |  |  |  |
| **10** | Contract Tile Install | **5** | **3** |  |  |  |  |  |  |
| **11** | Contr. Carp/Elec/Plum | **4,5,7** | **5** |  |  |  |  |  |  |
| **12** | Secure Permits | **9,10,11** | **8** |  |  |  |  |  |  |
| **13** | Delivery. Materials | **3,5,6,8** | **24** |  |  |  |  |  |  |

**5.2.2 Forward and Reverse Pass Network - Team 2 Worksheet**

Double click on an activity box to enter values in the excel table

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Forward & Reverse Pass Table - Class Worksheet** | | | | | | | | |
| **ID** | **Activity** | **Pred.** | **Time** | **Earliest** | | **Latest** | | **Float** | **Critical**  **Path** |
| **ES** | **EF** | **LS** | **LF** |
| **3** | Remove Burners | **-** | **2** |  |  |  |  |  |  |
| **4** | Remove Sink/Faucet | **-** | **1** |  |  |  |  |  |  |
| **5** | Disc & Remove oven | **-** | **1** |  |  |  |  |  |  |
| **6** | Remove Countertop | **3,4** | **1** |  |  |  |  |  |  |
| **7** | Remove Lower Cab. | **6** | **2** |  |  |  |  |  |  |
| **8** | Remove Upper Cab. | **5** | **1** |  |  |  |  |  |  |
| **9** | Remove Soffett | **8** | **1** |  |  |  |  |  |  |
| **10** | Remove Drywall | **7,9** | **1** |  |  |  |  |  |  |
| **11** | Remove Floor Tile | **7,9** | **1** |  |  |  |  |  |  |
| **12** | Rough in Electrical | **10** | **2** |  |  |  |  |  |  |
| **13** | Rough in Plumbing | **10** | **1** |  |  |  |  |  |  |
| **14** | Install new Drywall | **11,12,13** | **1** |  |  |  |  |  |  |
| **15** | Paint | **14** | **1** |  |  |  |  |  |  |

**5.2.2 Forward and Reverse Pass Network - Team 3 Worksheet**

Double click on an activity box to enter values in the excel table

**  **

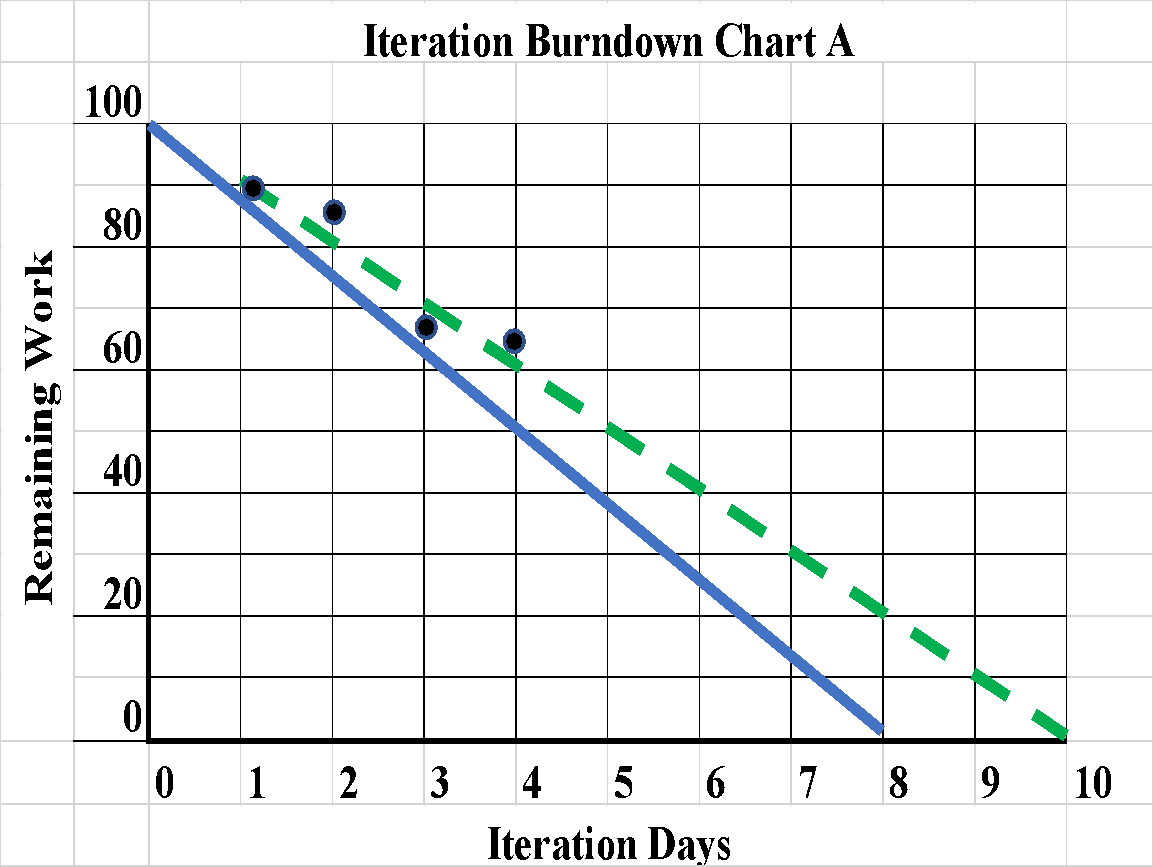
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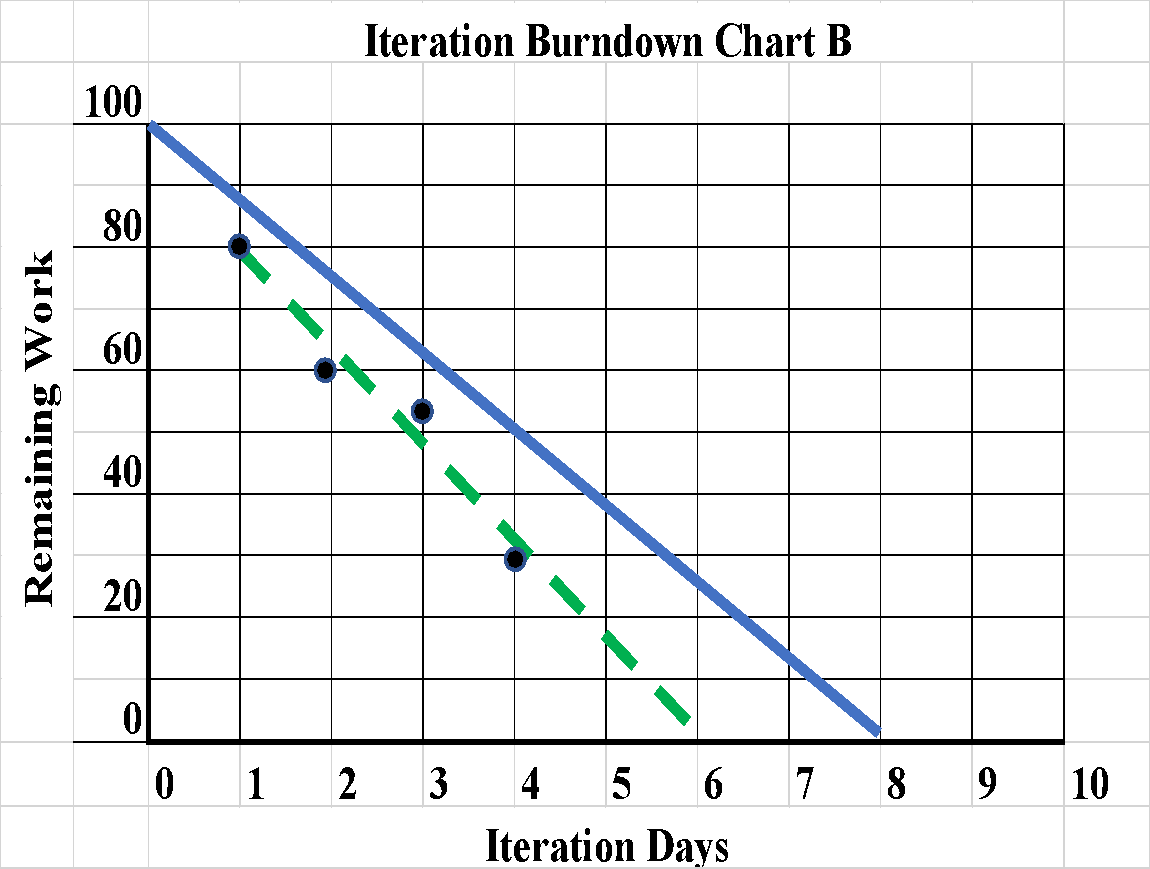
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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Forward & Reverse Pass Table – Team 3 Worksheet** | | | | | | | | |
| **ID** | **Activity** | **Pred.** | **Time** | **Earliest** | | **Latest** | | **Float** | **Critical**  **Path** |
| **ES** | **EF** | **LS** | **LF** |
| **4** | Finish Electrical Outlets | **-** | **1** |  |  |  |  |  |  |
| **5** | Install Upper Cabinets | **4** | **2** |  |  |  |  |  |  |
| **6** | Install Lower Cabinets | **4** | **1** |  |  |  |  |  |  |
| **7** | Install Countertop | **6** | **1** |  |  |  |  |  |  |
| **8** | Install Sink w/disposal | **7** | **1** |  |  |  |  |  |  |
| **9** | Install Dishwasher | **7** | **2** |  |  |  |  |  |  |
| **10** | Install Light w/fan | **5** | **1** |  |  |  |  |  |  |
| **11** | Install Microwave | **5** | **2** |  |  |  |  |  |  |
| **12** | Install new Floor Tile | **8,9** | **1** |  |  |  |  |  |  |
| **13** | Install Stove | **12** | **1** |  |  |  |  |  |  |
| **14** | Finish Trim | **12** | **2** |  |  |  |  |  |  |
| **15** | Paint Trim & Touch Up | **10,11,13,14** | **1** |  |  |  |  |  |  |

**5.2.3 Burndown Chart Worksheet**





1. What is the planned duration for iterations A and B? \_\_\_\_
2. Which chart is ahead of schedule and what is the expected finish? \_\_\_, \_\_\_
3. Which chart is behind schedule and what is the expected finish? \_\_\_, \_\_\_

**5.3.1 Crash Cost Worksheet**

Double click on an activity box to enter values in the excel table

Completed Tasks designated by black columns with times in parentheses

** **

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**** ****

Network activities A, B, and C are complete showing the actual times. Assume a linear relationship between estimated and crash times to compute and record the missing data in the following two charts. The cost to complete A, B, and C was $25,000.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Crash Cost Data Table** | | | | | | | |
| **Activity** | **Time (Weeks)** | | **Cost ($000s)** | | **Time Difference** | **Cost**  **Difference** | **Incremental Crash Cost/wk.** |
| **Normal** | **Crash** | **Normal** | **Crash** |
| **D** | **15** | **10** | **15** | **30** |  |  |  |
| **E** | **7** | **6** | **10** | **12** |  |  |  |
| **F** | **20** | **10** | **10** | **20** |  |  |  |
| **G** | **12** | **8** | **12** | **20** |  |  |  |
| **H** | **5** | **4** | **20** | **24** |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| **Crash Cost Comparison Table** | | | |
| **Parameter** | **Project Before Crashing** | **Team Assigned** | **Instructor Crash All** |
| **Completion Time** |  | 1 |  |
| **Critical Path** |  | 2 |  |
| **Cost** |  | 3 |  |

**5.3.2 Schedule Recovery Worksheet**

Double click on an activity box to enter values in the excel table

Completed Tasks designated by black column with times in parentheses

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Schedule Recovery Data Table** | | | | | | | | |
| **Activity** | **Time (wks.)** | | **Cost ($000s)** | | **Incremental Crash Cost/Wk.** | **Project After Crashing** | | **Critical Path** |
| **Normal** | **Crash** | **Normal** | **Crash** | **Cost** | **Time** |
| **A** |  |  |  |  |  | **$25K** | **3** |  |
| **B** |  |  |  |  |  | **9** |  |
| **C** |  |  |  |  |  | **10** |  |
| **D** | **15** | **10** | **15** | **30** |  |  |  |  |
| **E** | **7** | **6** | **10** | **12** |  |  |  |  |
| **F** | **20** | **10** | **10** | **20** |  |  |  |  |
| **G** | **12** | **8** | **12** | **20** |  |  |  |  |
| **H** | **5** | **4** | **20** | **24** |  |  |  |  |

Network activities A, B, and C are complete showing the actual times in parentheses. Copy the incremental crash cost/wk. for each activity and the Before Crashing parameters from exercise 5.3.1.  Then determine the least cost solution to achieve a 36-week completion. Fill in the missing data on these two charts.

|  |  |  |
| --- | --- | --- |
| **Schedule Recovery Solution Table** | | |
| **Parameter** | **Project Before Crashing** | **After Recovery** |
| **Completion Time** |  |  |
| **Critical Path** |  |  |
| **Cost** |  |  |

**5.3.3 Schedule Improvement Worksheet - Team \_\_\_**

Double click on an activity box to enter values in the excel table

Completed Tasks designated by black columns with times in parentheses

** **

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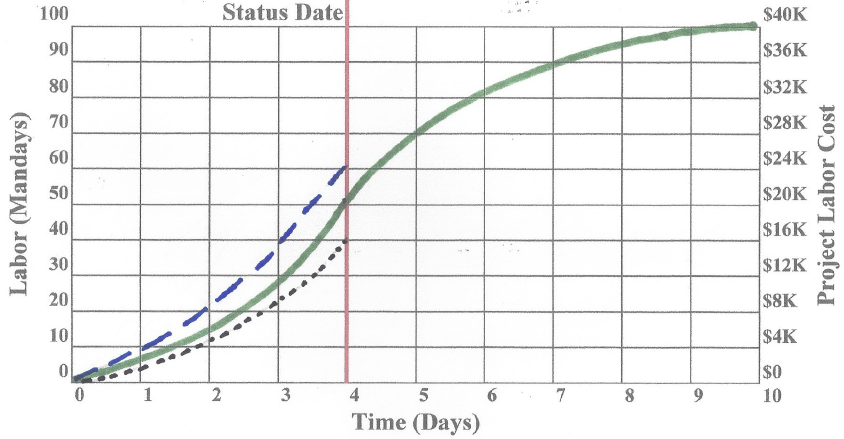
|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Schedule Improvement Data Table** | | | | | | | | |
| **Activity** | **Time (wks.)** | | **Cost ($000s)** | | **Incremental Crash Cost/Wk.** | **Project After Crashing** | | **Critical Path** |
| **Normal** | **Crash** | **Normal** | **Crash** | **Cost** | **Time** |
| **A** |  |  |  |  |  | **$25K** | **3** |  |
| **B** |  |  |  |  |  | **9** |  |
| **C** |  |  |  |  |  | **10** |  |
| **D** | **15** | **10** | **15** | **30** |  |  |  |  |
| **E** | **7** | **6** | **10** | **12** |  |  |  |  |
| **F** | **20** | **10** | **10** | **20** |  |  |  |  |
| **G** | **12** | **8** | **12** | **20** |  |  |  |  |
| **H** | **5** | **4** | **20** | **24** |  |  |  |  |

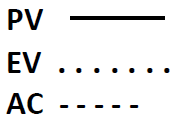
Network activities A, B, and C are complete showing the actual times in parentheses. Copy the incremental crash cost/wk. for each activity and the 36-week Recovery parameters from exercise 5.3.2. Then determine the least cost solution for your assigned completion. Fill in the missing data on these two charts.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Schedule Improvement Solution Table** | | | | |
| **Parameter** | **Recovery** | **Team 1** | **Team 2** | **Team 3** |
| **36 Week** | **35 Week** | **34 Week** | **33 Week** |
| **Least Cost Increment** |  |  |  |  |
| **Critical Path** |  |  |  |  |
| **Est. at Completion** |  |  |  |  |

**5.4.1 Earned Value Example Worksheet**

**Earned Value Example Case A Worksheet**



PV = \_\_\_\_\_\_\_\_\_\_

EV = \_\_\_\_\_\_\_\_\_\_

AC = \_\_\_\_\_\_\_\_\_\_

SV = \_\_\_\_\_ CV= \_\_\_\_\_\_

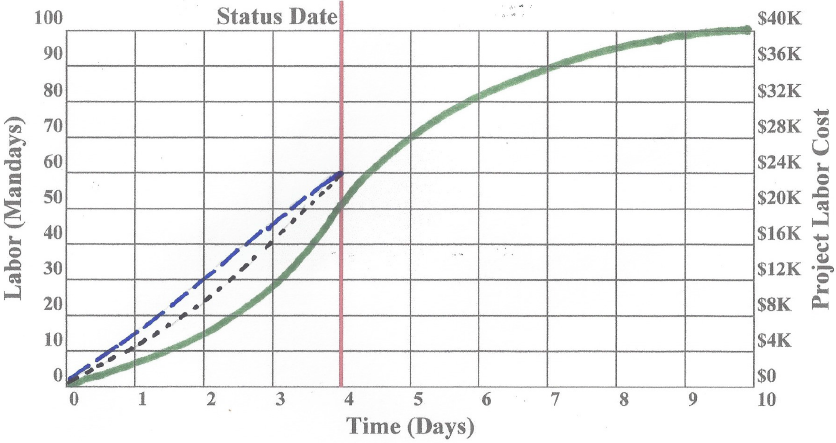
SPI = \_\_\_\_ CPI = \_\_\_\_

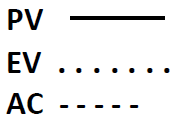
Schedule Status: \_\_\_\_\_\_\_ Budget Status: \_\_\_\_\_\_\_\_

**Show Calculations**

**5.4.2 Earned Value Case B Team 1 Worksheets**

**Earned Value Case B Worksheet Team 1**



PV = \_\_\_\_\_\_\_\_\_\_

EV = \_\_\_\_\_\_\_\_\_\_

AC = \_\_\_\_\_\_\_\_\_\_

SV = \_\_\_\_\_ CV= \_\_\_\_\_\_

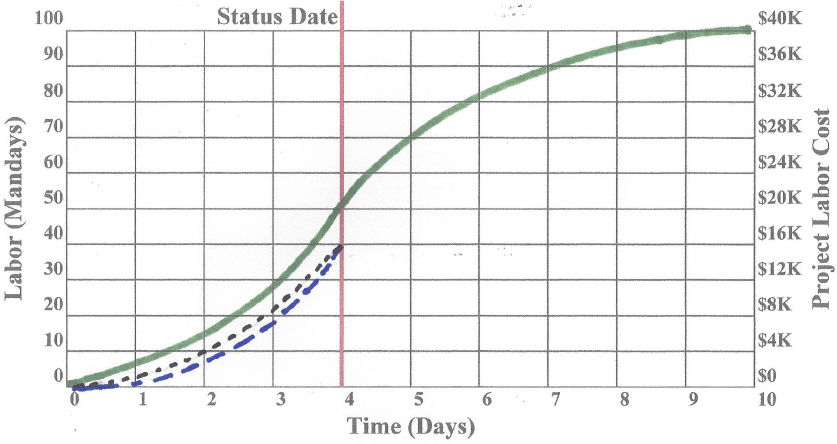
SPI = \_\_\_\_ CPI = \_\_\_\_

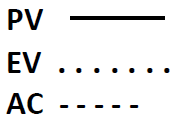
Schedule Status: \_\_\_\_\_\_\_ Budget Status: \_\_\_\_\_\_\_\_

**Show Calculations**

**5.4.2 Earned Value Case C Team 2 Worksheets**

**Earned Value Case C Worksheet Team 2**



PV = \_\_\_\_\_\_\_\_\_\_

EV = \_\_\_\_\_\_\_\_\_\_

AC = \_\_\_\_\_\_\_\_\_\_

SV = \_\_\_\_\_ CV= \_\_\_\_\_\_

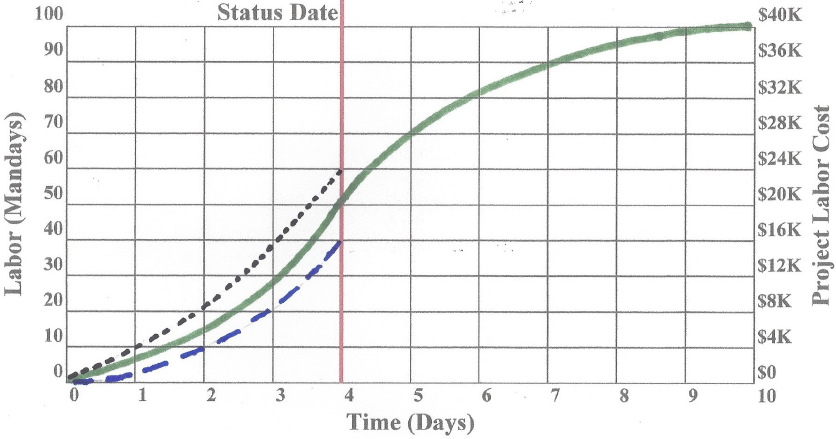
SPI = \_\_\_\_ CPI = \_\_\_\_

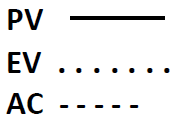
Schedule Status: \_\_\_\_\_\_\_ Budget Status: \_\_\_\_\_\_\_\_

**Show Calculations**

**5.4.2 Earned Value Case D Team 3 Worksheets**

**Earned Value Case D Worksheet Team 3**



PV = \_\_\_\_\_\_\_\_\_\_

EV = \_\_\_\_\_\_\_\_\_\_

AC = \_\_\_\_\_\_\_\_\_\_

SV = \_\_\_\_\_ CV= \_\_\_\_\_\_

SPI = \_\_\_\_ CPI = \_\_\_\_

Schedule Status: \_\_\_\_\_\_\_ Budget Status: \_\_\_\_\_\_\_\_

**Show Calculations**

**5.4.2 Earned Value Performance Causes Worksheet**

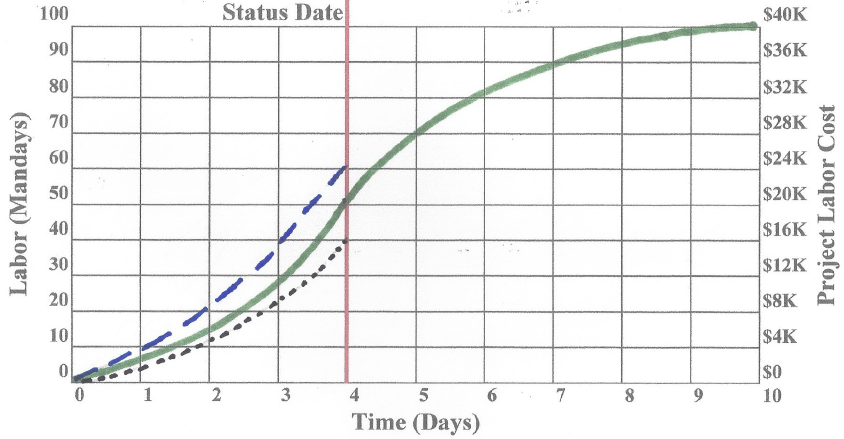
Causes for Earned Value Performance for Cases A through D in exercises 5.4.1 and 5.4.2

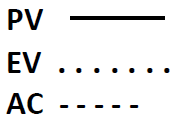
This table lists possible causes leading to the performance reflected in the earned value charts from the current exercise as well as the prior class exercise. The charts are identified as Cases A through D. This summary chart is sequenced after the individual cases and is larger than the one in the *Project Management eWorkbook* to provide more space for answers.

|  |  |  |  |
| --- | --- | --- | --- |
| **Causes for Earned Value Performance Table** | | | |
| **Case A - Class** | **Case B - Team 1** | **Case C - Team 2** | **Case D - Team 3** |
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**5.4.3 Forecasting Case A Example Worksheet**

**Forecasting Example Case A Worksheet**



Compute the following based on the given assumptions: 

Forecast @ 100% Eff. ETC = \_\_\_\_ EAC = \_\_\_\_

ETC Efficiency to Meet the Budget TCPI = \_\_\_\_\_

**Show Calculations**

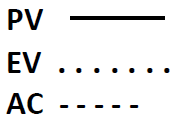
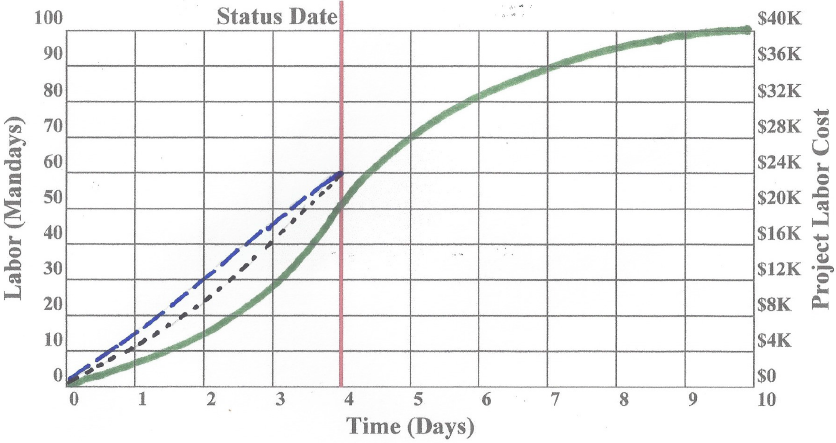
**5.4.4 Forecast Solutions Graphing and Probability Worksheet**

The following table summarizes the current and forecasted (TCPI) efficiencies for Cases A through D. Each team records efficiencies for their assigned case, discusses the probability of meeting the forecast, and records their conclusions in terms of zero, low, medium, and high. After teams report on probability, the class prioritizes the four cases with one being the most likely to the least likely.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Probability of Meeting New Budget Goal Table** | | | | |
| **CASE** | **Current Eff.** | **TCPI Eff.** | **Probability** | **Priority** |
| Case A Class | **0.67** |  |  |  |
| Case B – Team 1 | **1.00** |  |  |  |
| Case C – Team 2 | **1.00** |  |  |  |
| Case D – Team 3 | **1.50** |  |  |  |

**5.4.4 Forecasting Team 1 Worksheet**

**Forecasting Case B Worksheet Team 1**



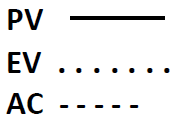
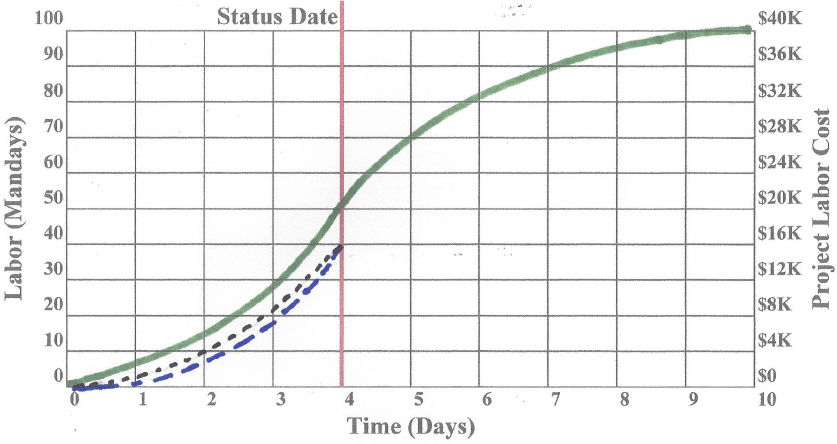
Forecast @ 125% Eff. ETC = \_\_\_\_ EAC = \_\_\_\_

ETC Efficiency to Beat Budget by $2K TCPI = \_\_\_\_\_

**Show Calculations**

**5.4.4 Forecasting Team 2 Worksheet**

**Forecasting Case C Worksheet Team 2**



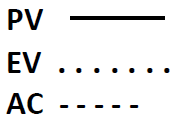
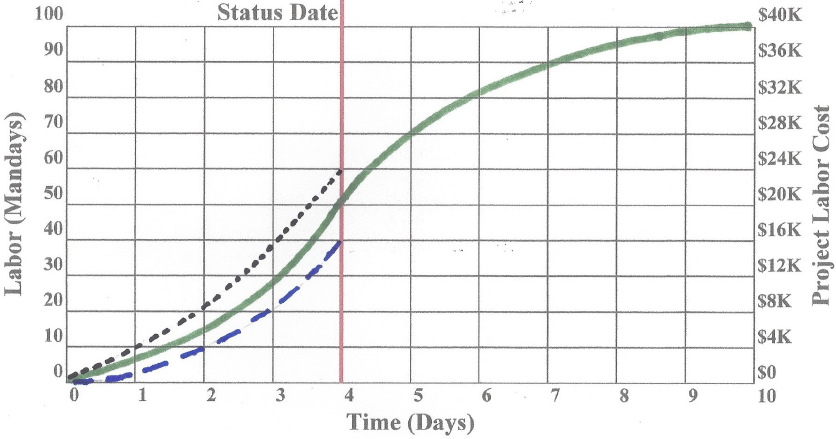
Forecast @ 125% Eff. ETC = \_\_\_\_ EAC = \_\_\_\_

ETC Efficiency to Beat Budget by $2K TCPI = \_\_\_\_\_

**Show Calculations**

**5.4.4 Forecasting Team 3 Worksheet**

**Forecasting Case D Worksheet Team 3**



Forecast @ Current Eff. ETC = \_\_\_\_ EAC = \_\_\_\_

ETC Efficiency to Beat Budget by $12K TCPI = \_\_\_\_\_

**Show Calculations**

**5.4.5 Performance Trends Worksheet Team \_\_\_**

Project Data: The following table and graph reflect data for the first five weeks of an eight-week project. The data represents the cumulative costs from the beginning of the project to the end of the specified week for each parameter. (i.e. 350 is the cumulative EV for the first three weeks.)





**Assigned Week \_\_\_, PV = \_\_\_\_\_\_\_ AC = \_\_\_\_\_\_\_\_\_ EV = \_\_\_\_\_\_\_\_**

**Identify chart area for under budget EV values: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Identify chart area for behind schedule EV values: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**CPI = \_\_\_\_\_\_\_\_ SPI = \_\_\_\_\_\_\_\_\_ Project Status: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**EAC = \_\_\_\_\_\_\_\_\_\_ Budget Variance at Completion: \_\_\_\_\_\_\_\_\_\_\_**

**5.5.1 Change Control Process Worksheet Team \_\_\_\_**

**Change Request Form**

**Change Request Flow Chart**

**5.5.2 Change Control Implementation Team 1 Worksheet A**

**Material Substitution**

During the equipment build at HTMI’s plant in Brazil the Direct Materials Purchasing Agent, Adolph Hummer, decided to substitute a different paint rather than use the paint specified in the project requiring a specific single-source U.S. supplier. The color chips were virtually the same as the U.S. supplier. No one checked the Material Safety Data Sheets (MSDS) for the chemical content of the paint. The paint substitution allowed competitive bidding by local sources in Brazil, which saved $5,000 on the total cost of paint for each machine and promised free delivery. He also had used the local source in the past with good results.

**Bakersfield Plant Project Change Request Form**

**When Should Change be Initiated: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Justification:**

**Analysis:**

**Recommendation:**

Consequence: After equipment assembly had begun at the Bakersfield site, plant personnel conducted their regular testing of paint for hazardous materials. The testing revealed that orange paint used on all large moving parts had excessive amounts of lead in violation of OSHA standards. HTMI had to disassemble the equipment and ship the components to another site for lead abatement. The abatement involved removing commercial components such as bearings, sleeves and joints, sand blasting of components to remove the lead paint, repainting, and reassembly of commercial components. It cost HTMI over $1,000,000 dollars and added four weeks to the installation.

**5.5.2 Change Control Implementation Team 2 Worksheet B**

**Specification Change**

Art Rost is the GMI Buyer responsible for machinery and equipment. One of his department objectives, and an element of his annual appraisal, is the amount of money saved through negotiations with the initial supplier versus their original quoted price. He was frustrated with the HTMI equipment purchase since the unique nature of the equipment did not leave much room for negotiating and leveraging other bidders. One of the specification requirements was to provide all training and support for ramp-up of the equipment, which HTMI had bid at $50,000. Art considered this excessive and in the final negotiations asked HTMI to remove it from their quote. HTMI quickly agreed to remove the item and signed a joint letter indicating the change, which became an attachment to the purchase order. Art showed a $50,000 savings

**Bakersfield Plant Project Change Request Form**

**When Should Change be Initiated: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Justification:**

**Analysis:**

**Recommendation:**

Consequence: Due to the proprietary nature of the equipment, the Purchasing Department at the Bakersfield Plant single-sourced development of training materials and train-the-trainer instructors to HTMI. During ramp-up they paid standard hourly service rates for all support personnel required from HTMI. The cost to GMI exceeded $250,000. In their quote, HTMI had originally planned to absorb the training as part of their new product development and their equipment estimates always had an allowance for start-up support. The $50,000 they submitted was only the extra support required for the new design.

**5.5.2 Change Control Implementation Team 3 Worksheet C**

**Equipment Layout Change**

Dave Bakus is the new Production Manager promoted from Facility Engineer by GMI for the Bakersfield Plant. He appears on the GMI organization chart in Chapter 8 as the Facility Engineer, since GMI did not promote him until after the plant construction began. During start-up he observed that his equipment operators and maintenance personnel had to go to the other side of the equipment for lock-out during tool changes, adjustments, or repairs. This required approximately 30 seconds of travel each way and over the course of a shift represented 10 to 20 minutes of downtime. More importantly, the added travel time was a deterrent to employees using the lock-out device as required.

**Bakersfield Plant Project Change Request Form**

**When Should Change be Initiated: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

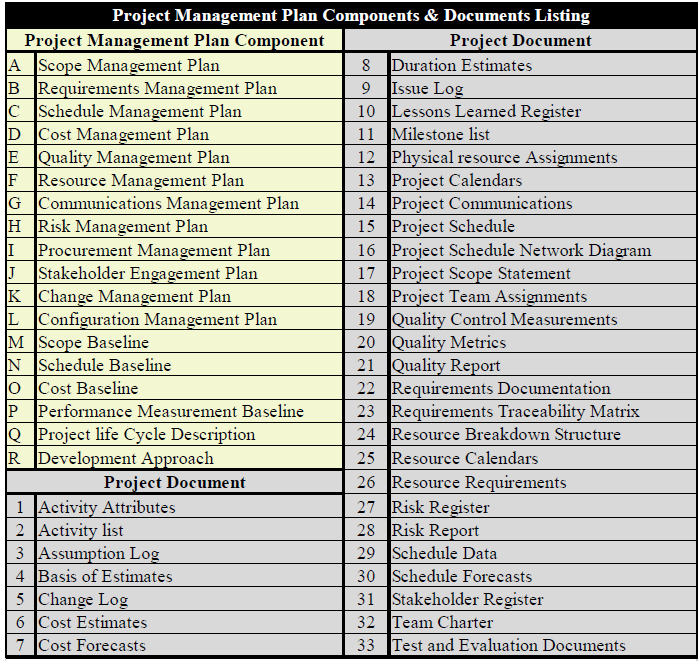
**Justification:**

**Analysis:**

**Recommendation:**

Consequence: Involving Joe or other users of the equipment with the initial design might have identified the issue early, and the resulting change request showing the lock-out in the proper location would incur little or no cost. However, a change request at this point will incur an expense of $10,000 per machine to either relocate the existing lock-out or add an auxiliary lock out device.

**5.5.2 PM Components and Project Documents affected by Change**



|  |  |
| --- | --- |
| **Components/Documents Affected by Change** | |
| **Project Management Plan Components** | **Project Documents** |
| **Team 1 – Material Substitution** | **Team 1 – Material Substitution** |
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| **Team 2 – Specification Change** | **Team 2 – Specification Change** |
|  |  |
| **Team 3 – Equipment Layout Change** | **Team 3 – Equipment Layout Change** |
|  |  |

**5.6.1 Quality Benefits Worksheet**

In class give students time to answer the questions, then facilitate a discussion.

Online use this as a threaded discussion between class sessions.

**What are the benefits of having an effective quality process?**

**What value does a company get from a strong quality reputation?**

**What causes project managers to make poor quality decisions?**

**5.6.2 Quality Metrics Part A Worksheet**

|  |  |
| --- | --- |
| **Team 1 – Cost Metrics, Tools, Techniques** | |
| **Metric** | **Tools/Techniques** |
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| **Team 2 – Time Metrics, Tools, Techniques** | |
| **Metric** | **Tools/Techniques** |
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| **Team 1 – Scope Metrics, Tools, Techniques** | |
| **Metric** | **Tools/Techniques** |
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**5.6.2 Quality Metrics Part B Worksheets**

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| **Team 1 – Human Resources Metrics, Tools, Techniques** | |
| **Metric** | **Tools/Techniques** |
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| Team 2 – Communication Metrics, Tools, Techniques | |
| Metric | Tools/Techniques |
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| **Team 3 – Problem Resolution Metrics, Tools, Techniques** | |
| **Metric** | **Tools/Techniques** |
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**5.6.3 Project Deliverables Certification**

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| **Team 1 BCI** | |
| **Item #** | **Facility - Deliverables Certification** |
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| **Team 2 HTMI** | |
| **Item #** | **Manufacturing Process - Deliverables Certification** |
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| **Team 3 GMI** | |
| **Item #** | **Production & Delivery of Gadget - Deliverables Certification** |
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**5.6.4 Project Quality Situations Worksheet**

**Situation A - Software Testing - Team 1**

**Decision Authority: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Decision: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Supporting Philosophy: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Bullet Points supporting the decision**

**Situation B – Training – Team 2**

**Decision Authority: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Decision: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Supporting Philosophy: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Bullet Points supporting the decision**

**Situation C - Equipment Buy off at Supplier – Team 3**

**Decision Authority: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Decision: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Supporting Philosophy: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Bullet Points supporting the decision**

**5.7.1 Conflict Reduction Worksheet**

**Team 1 - Responsibilities - Conflict Reduction Tools and Techniques**

**Team 2 - Cost - Conflict Reduction Tools and Techniques**

**Team 3 - Schedule - Conflict Reduction Tools and Techniques**

**5.7.2 Personality Conflict Worksheet**

**TEAM 1 - Put yourself in Diane’s position as project manager. How would you resolve the conflict you have with John Willy?**

**TEAM 2 - Put yourself in John’s position responsible for the new process performance. What would you do to resolve your conflict with Diane Baldwin?**

**TEAM 3 - As the CEO of GMI, what actions would you take to minimize the conflict between Diane and John?**

**5.7.3 Project Scorecard Worksheet - Team \_\_\_**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Metrics, Goals, Status** | | | **Four (Day or Week) Data** | | | | **Cumm.**  **to**  **Date** |
| **Data as of \_\_\_\_\_\_** | | |
| **Metric** | **Goal** | **Status** | **1** | **2** | **3** | **4** |
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**Analysis and Corrective Action:**

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**5.81 Risk Identification Worksheet - Team \_\_\_**

**Risk Events Worksheet**

**All Sources of Project Risk**

|  |  |  |
| --- | --- | --- |
| **Risk Sources** |  | **Risk Events** |
|  |  | **A.** |
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| **B.** |
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| **D.** |
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| **F.** |
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**Risk Probability/Impact (P/I) Matrix Worksheet**

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| **P**  **R**  **O**  **B**  **A**  **B**  **I**  **L**  **I**  **T**  **Y** |  | **Risks** | | | **Opportunities** | | |  |
| **High** |  |  |  |  |  |  | **High** |
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| **Med.** |  |  |  |  |  |  | **Med.** |
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| **Low** |  |  |  |  |  |  | **Low** |
|  | **Low** | **Med.** | **High** | **High** | **Med.** | **Low** |  |
| **Impact** | | | | | | | |

**5.8.2 Risk Strategy and Register Worksheets**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Risk Response Strategy Table** | | | | | | | |
| **Label** | **Risk Description** | **Escalate** | **Avoid** | **Accept** | **Transfer** | **Mitigate** | **Share** |
| **A** |  |  |  |  |  |  |  |
| **B** |  |  |  |  |  |  |  |
| **C** |  |  |  |  |  |  |  |
| **D** |  |  |  |  |  |  |  |
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| --- | --- | --- | --- | --- | --- | --- |
| **Risk Register** | | | | | | |
| **Identification** | | **Assessment** | | **Response** | | |
| **Risk** | **Consequence** | **Prob.**  **L-M-H** | **Impact**  **L-M-H** | **Action Trigger** | **Resp. Person** | **Plan** |
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**5.8.3 Risk Management Worksheet**

In class, give students time to answer the questions, then facilitate a discussion.

Online use this as a threaded discussion between class sessions

**What is your experience with formal or informal risk identification and contingency planning?**

**How and when do you manage risk on a project?**

**What value does risk management add to the project plan and what effect does it have on results?**

**6.0 Complete Word Worksheet Bookmarks Table**

**Worksheet Bookmark Page**

[**6.1.1 Leadership Situations**](#iamdexc1mm0a) **123**

[**6.1.2 Leadership Structures**](#dba8hnxsyeji) **124**

[**6.2.1 Decision Making**](#qsprz6gq6yia) **125**

[**6.3.1 Project Manager Role**](#ixkyq9mn7bij) **126**

[**6.3.2 Character Traits Worksheet**](#lq0jcbor2ygg) **127**

[**6.3.3 Project Balance Team 1 Worksheet**](#8wp6wyljbgpc) **128**

[**6.3.3 Project Balance Team 2 Worksheet**](#aau9dcpfmkdl) **129**

[6.3.3 Project Balance Team 3 Worksheet](#ws633p) **130**

[**6.4.1 Checklists Worksheet**](#2150o77ab6jb) **131**

[6.4.2 Visual Control Boards](#ws642p) **132**

**6.1.1 Leadership Situations Worksheet**



For each situation identify leadership style, readiness, and expected level of success.

**Situation A Team 1**

**Readiness: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Leadership Style: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Level of Success: \_\_\_\_\_\_\_\_\_\_ Best Leadership Style: \_\_\_\_\_\_\_\_\_\_\_\_\_**

**Explain:**

**Situation B Team 2**

**Readiness: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Leadership Style: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Level of Success: \_\_\_\_\_\_\_\_\_\_ Best Leadership Style: \_\_\_\_\_\_\_\_\_\_\_\_\_**

**Explain:**

**Situation C Team 3**

**Readiness: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Leadership Style: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Level of Success: \_\_\_\_\_\_\_\_\_\_ Best Leadership Style: \_\_\_\_\_\_\_\_\_\_\_\_\_**

**Explain:**

**6.1.2 Leadership Structures Worksheet**

In class give students time to answer the questions, then facilitate a discussion.

Online use this as a threaded discussion between class sessions.

**Based on your experience with a group led by a supervisor: Describe experience, method of leader appointment, level of self-leadership**

**Based on your experience with a group led by a co-performer: Describe experience, method of leader appointment, level of self-leadership**

**Based on your experience with a group led by an outside facilitator: Describe experience, method of leader appointment, level of self-leadership**

**6.2.1 Decision Making Worksheet**

|  |  |  |
| --- | --- | --- |
| **Best Decision** | | |
| **Situation** | **Best Approach** | **Logic** |
| **A**  **Team 1** |  |  |
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| **B**  **Team 2** |  |  |
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|  |  |
| **C**  **Team 3** |  |  |
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| --- | --- | --- |
| **Worst Decision** | | |
| **Situation** | **Worst Approach** | **Logic** |
| **A**  **Team 1** |  |  |
|  |  |
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| **B**  **Team 2** |  |  |
|  |  |
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| **C**  **Team 3** |  |  |
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**6.3.1 Project Manager Roles Worksheet**

In class give students time to answer the questions, then facilitate a discussion.

Online use this as a threaded discussion between class sessions.

**Why do Project Manager’s require skills in leadership, business, and strategic planning?**

**Name the top three qualities you would look for when hiring a project manager? Explain your selection**

**What issues should be considered when promoting an outstanding engineer to project manager?**

**6.3.2 Character Traits Worksheet**

|  |  |  |  |
| --- | --- | --- | --- |
| **Character Trait Examples** | | |  |
| **Positive**  **Character**  **Trait** | **Class**  **Member**  **1st Name** | **Action Exemplifying**  **Positive Trait** | **Priority** |
| **Organizer** |  |  |  |
| **Expert** |  |  |  |
| **Recorder** |  |  |  |
| **Analyst** |  |  |  |
| **Timekeeper** |  |  |  |
| **Achiever** |  |  |  |
| **Inquirer** |  |  |  |
| **Peacemaker** |  |  |  |

|  |  |  |
| --- | --- | --- |
| **Balancing Character Traits** | | |
| **Negative**  **Trait** | **Offsetting**  **Trait** | **Explanation** |
| **Riddler**  **Team 1** |  |  |
| **Critic**  **Team 1** |  |  |
| **Filibuster**  **Team 2** |  |  |
| **Hermit**  **Team 2** |  |  |
| **Procrastinator**  **Team 3** |  |  |
| **Gladiator**  **Team 3** |  |  |

**6.3.3** **Project Balance Team 1 Worksheet**

**Approving a Change Request**

**Developing an initial schedule**

**Resolving a personality conflict**

**6.3.3 Project Balance Team 2 Worksheet**

**Assigning a task to a team**

**Approving a vacation request**

**Authorizing overtime**

**6.3.3 Project Balance Team 3 Worksheet**

**Developing the project estimate**

**Problem solving a technical issue**

**Selecting a new supplier for project materials**

**6.4.1 Checklists Worksheet Team \_\_\_**

**Preparatory Checklist for First Class**

Course Number: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Start Date: \_\_\_\_\_\_\_\_\_\_\_\_

Course Title: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Course sign up**

**Books, equipment and materials**

**Personal adjustments**

**Work in preparation for class**

**Other ideas**

**6.4.2** **Visual Control Boards Worksheet**

**Overall Course Information - Team 1**

**Contact Information - Team 2**

**Course Schedule - Team 3**

**Course Progress - Team 3**

**Course Issues and Other Ideas - All Teams**

**7.0 Close Word Worksheet Bookmarks Table**

**Worksheet Bookmark Page**

[**7.1.1 Project Closure Worksheet**](#cmza23t4jgog) **134**

[**7.1.2 Project to User Linkage Worksheet**](#hw3t4n64f8ae) **135**

[**7.1.3 Project Evaluation Form Worksheet Team**](#6dq046suubt0) **136**

[**7.1.4 Future Opportunities Worksheet**](#mvjim57ruw8j) **137**

[**7.2.1 Lessons Learned Integration Worksheet**](#gxgnjsj9jm2n) **138**

[**7.3.1 Ethics Importance and Support Worksheet**](#adijnu9sv3wj) **139**

[**7.3.2 Bribes Worksheet**](#68jyjqhykrfn) **140**

[**7.3.3 Ethics Worksheet**](#pigfy85obzr4) **141**

[**7.4.1 PMP Application – Experience Worksheet Team**](#crosqhyp8bsi) **142**

**7.1.1 Project Closure Worksheet**

In class, give students time to answer the questions, then facilitate a discussion.

Online use this as a threaded discussion between class sessions. When answering the following questions, think of this course as a project with each week being a phase in the project.

**When should lessons learned be identified?**

**How should we close out the course?**

**What steps are needed?**

**How is satisfaction measured?**

**How do we celebrate?**

**7.1.2 Project to User Linkage Worksheet**

In class, give students time to answer the questions, then facilitate a discussion.

Online use this as a threaded discussion between class sessions

**What are the benefits for HTMI when the GMI Manufacturing Department is heavily involved with the equipment installation?**

**What are some obstacles to securing GMI Manufacturing Department’s involvement in the equipment installation?**

**What are the benefits for GMI when their manufacturing personnel are involved in the installation of the HTMI equipment?**

**7.1.3 Project Evaluation Form Worksheet Team \_\_\_\_**

**Project Title: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

|  |  |
| --- | --- |
| **Project Results** | |
| **Goals/Deliverables** | **Rating System** |
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| **Process** | |
| **Parameters** | **Rating System** |
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Comments:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Recommendations:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**7.1.4 Future Opportunities Worksheet**

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| --- | --- | --- |
| **Collaboration Opportunities for Interactions Over Bakersfield Product Life Span** | | |
| **Team 1 - GMI and BCI** | **Team 2 - GMI and HTMI** | **Team 3 - HTMI and BCI** |
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| **Leverage Relationships in Other Projects** | | |
| **Team 1 - GMI and BCI** | **Team 2 - GMI and HTMI** | **Team 3 - HTMI and BCI** |
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| **Estimated $ Value of Future Joint Relationships (Use 5 Year Window)** | | |
| **Team 1 - GMI and BCI** | **Team 2 - GMI and HTMI** | **Team 3 - HTMI and BCI** |
|  |  |  |

**7.2.1 Lessons Learned Integration Worksheet**

**Using the data sheet or your class list categorize lessons learned by number on the chart**

|  |  |  |  |
| --- | --- | --- | --- |
| **Class List Categorized Lessons Learned** | | | |
| **Content** | **Pace** | **Requirements** | **WebEx Facilitation** |
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**Other Lessons Learned from Students (Provide detailed descriptions of other student lessons learned)**

**Five Most Significant Lessons Learned (Each Team identifies the five most significant lessons learned)**

**7.3.1 Ethics Importance and Support Worksheet**

**Team 1 - Why are ethics more important for project managers than typical middle managers?**

**Team 2 - What steps can companies take to support ethical behavior?**

**Team 3 - What steps can PM’s take to support ethical behavior?**

**7.3.2 Bribes Worksheet**

In class, give students time to answer the questions, then facilitate a discussion.

Online use this as a threaded discussion between class sessions

**How prevalent are bribes aimed at Project Managers?**

**Do all bribes look alike?**

**What about free lunch, sports tickets, or gifts at holiday time?**

**7.3.3 Ethics Worksheet**

**Team 1 – HTMI develops a new testing procedure.**

**Team 2 - Diane is approached by her uncle during Thanksgiving**

**Team 3 - Diane has holiday issue with German nationals in U.S.**

**7.4.1 PMP Application – Experience Worksheet Team \_\_\_**

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| --- | --- | --- | --- | --- | --- | --- |
| **4500 Hours Experience Spreadsheet Summary** | | | | | | |
| **Project Name** | **Start** | **Finish** | **Duration** | | **Total**  **Hours** | **Hrs./Week** |
| **Months** | **Weeks** |  |
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| **Total Non-Overlapping Months** |  | | |  |  |  |

**Student’s Project Experience Submission for PMP Certification**

**List each project’s overview info, but exclude the organization to preserve anonymity.**

**OVERVIEW - Project Title: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Started:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **Finish:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Project Role:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **Primary Industry:** \_\_\_\_\_\_\_\_\_\_\_\_\_

**PROJECT DETAILS - Project Title: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Note: Refer to the task descriptions in the PMP Exam Content Outline on pages 5 through 12 when identifying tasks performed in each of the domain time to support domain allocations.**

**Initiating**

\_\_\_\_\_\_\_\_

**Planning**

**\_\_\_\_\_\_\_\_\_**

**Executing**

**\_\_\_\_\_\_\_\_\_**

**Control & Monitor**

**\_\_\_\_\_\_\_\_\_\_**

**Closing** \_\_\_\_\_\_\_

**Description**

**Note: Hours for each project must be divided into the five domains listed above. A single project may not cover all domains, provided the cumulative project experience does. Ensure project descriptions reflect tasks for any domains you are claiming hours and limit descriptions to 550 characters or less.**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**