

RISK BASED GRADED APPROACH WORKSHEET DEVELOPMENT GUIDELINES

INTRODUCTION

A risk-based “graded approach analysis” methodology is used to determine requirements for planning and control of the project work effort. This analysis will maximize project control effectiveness at the lowest cost and assist in identification and mitigation of project risks.

The graded approach analysis is a management tool used to:

1. Determine where to assign appropriate PM resources;
2. Help define scope of work for the project;
3. Evaluate risk elements based on risk (vs. cost of project); and,
4. Achieve consensus from all members of the project team on what the risks are on the project.

The “Graded Approach Worksheet” is a short exercise to complete, even on the most complex project. The “Graded Approach Worksheet” is completed as part of the Initiation Process on a project. Completion of the “Graded Approach Worksheet” is an efficient way to quantify project risk early in the project timeline and should not be used as a substitute for formal risk identification, qualification, quantification, and response planning performed during the planning process. The Graded Approach Worksheet should be completed and reviewed with FTE Staff prior to manhour negotiations.

DEFINITIONS

Graded Approach: A flexible selection process that allows the project manager to choose a more or less rigorous application of project control elements depending on the key elements identified. This flexibility permits customizing project control needs and personnel to the specific project and focus the team efforts accordingly (i.e., “the 5 – 5’s or 5 for risk assessment and 5 for priority).

Risk Based Graded Approach: A “Graded Approach Worksheet” identifies and documents values for predetermined risk elements. Identification of a total risk score denotes the probability of any potential impacts on project deliverables cost / schedule baselines during project execution. Identification of project risk qualifies the possibility of baseline impacts (e.g., not meeting intended technical functions, internal or external schedule commitments, cost thresholds, et al)

RISK ELEMENT

Twenty pre-determined risk areas; developed by FTE from experience on numerous projects. It should be noted that not all of these elements may be applicable to every project. The Project Manager should identify those elements that are not applicable and adjusting the total risk score scale accordingly.

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RISK ASSESSMENT

The “Risk Assessment” value is determined by the project team and documented on the graded approach worksheet. The below-listed guidelines can be used to guide the team members in determining the overall level of risk, per element, to project priorities (i.e., scope, schedule, and cost). Risk assessment values are recorded as follows:

- 1 – Low risk
- 3 – Medium risk
- 5 – High risk

1 - TECHNOLOGY – defines what degree of technical complexity will be faced by the project team in executing the project.

- 1 – Utilize off the shelf technology
- 3 – Buy something off the shelf and do something else to it; an engineered solution
- 5 - Perform research and development (R&D) activities

2 - PROJECT SCHEDULE – defines how much time the project team has to complete the schedule.

- 1 – Everyone has as much time as they want.
- 3 – The schedule is somewhat compressed
- 5 – The schedule is very compressed or very critical

3 - COORDINATION – defines how many organizations are involved in project planning and/or execution

- 1 – One to three
- 3 – Four to seven
- 5 – Greater than eight

4 - ENVIRONMENTAL – defines the level of environmental impacts.

- 1 – Minimal
- 3 – Medium
- 5 – Major

5 - CONTAMINATION – defines the level of contamination impacting the project.

- 1 – Minor or none
- 3 – Medium
- 5 – Major contamination issues

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6 - REGULATORY INVOLVEMENT – identifies the degree that governmental or other regulatory agencies impact your project.

- 1 – None or minor involvement
- 3 – Somewhat involved
- 5 – Regular contact and/or visit's

7 - RESOURCE AVAILABILITY – defines the availability of internal and external resources to plan and execute the project.

- 1 – Resources readily available
- 3 – Resources are somewhat restricted
- 5 – The project will be resource constrained impacting schedule and cost

8 - EXPERIENCE/CAPABILITY – defines the level of experience and capability of project team members.

- 1 – Project loaded with senior staff.
- 3 – A blend of senior staff and junior staff
- 5 – Project loaded with junior staff

9 - PROJECT FUNDING – defines availability and approval status of project planning and execution funds.

- 1 – Single source and approved
- 3 – Multiple source and approved
- 5 – Haven't identified a source but go ahead and start the project.

10 - POLITICAL VISIBILITY – Indicates the level of exposure the project has to senior management.

- 1 – None - just get it done
- 3 – Somewhat visible – publish quarterly performance reports
- 5 – Highly visible – scheduled visits by and monthly performance reports to top management

11 - PUBLIC INVOLVEMENT – Indicates how much the public is involved in your project

- 1 – None – just get it done
- 3 – Somewhat involved – issue news releases as required
- 5 – Very involved – representative(s) part of project scope, schedule, cost, and quality decisions

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12 - SAFETY – defines the safety issues the project team will encounter while completing the project.

- 1 – Standard safety considerations
- 3 – Increased diligence due to location, product weight or configuration, or type of work (e.g., high voltage)
- 5 – Very restrictive safety considerations (e.g., caustic environment, hot-taps, etc.)

13 - UTILITIES – defines the level of utility coordination/relocation efforts

- 1 – Minimal or very little impact; no utility relocations
- 3 – Many utility relocations
- 5 – Projects requiring JPA's with many utility companies

14 - RIGHT-OF-WAY - defines the level of R/W involvement

- 1 – Minimal, no R/W takings
- 3 – Corner clips and strip takes
- 5 – Parcel takes, relocation effort required

15 - TOLLS – defines the level of toll involvement

- 1 – Minimal to none
- 3 – Minimal impacts to toll plazas
- 5 – Major impacts to toll plazas

16 - CONSTRUCTION/ CONSTRUCTABILITY (MOT) – Indicates how complex the project construction is anticipated to be

- 1 – None
- 3 – Somewhat complex
- 5 – Major complexity

17 - MAINTENANCE – quantifies the long term maintenance risk

- 1 – Low
- 3 – Medium
- 5 – High

18 - FACILITIES/ARCHITECTURE – defines the level involvement with facilities

- 1 – Minimal
- 3 – Some impacts to buildings, gantries, etc.
- 5 – Major, vertical construction

19 - MATERIAL AVAILABILITY – calculation of risk due to material availability

- 1 – Low
- 3 – Medium
- 5 – High

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20 – OTHER – other items affecting the project that are not included in the above listed categories

- 1 – Low
- 3 – Medium
- 5 – High

RISK PRIORITY

The project team identifies where they will apply priorities within the identified risk elements. The team determines where the “5’s” (i.e., highest priority) and scores the balance with either a “3” (medium priority) or “1” (low priority). A worksheet with 10 to 15 elements will have ONLY three “5’s” for priority. A worksheet with 16 to 20 elements will have ONLY four “5’s” for priority.

TOTAL SCORE

The Total Score is calculated by multiplying the scores in the risk assessment column times the priority scores for a total per risk element. The risk element scores are then summed to determine a “Total Risk Score”.

- High Risk > or = the number of elements multiplied by 10
- Medium Risk > 60% of the number of elements multiplied by 10
- Low Risk < 60% of the number of elements multiplied by 10

INTERPRETING THE GRADED APPROACH WORKSHEET

There are two values to look at:

- 1.) The total risk score – where it fits into specified ranges to determine if the project is low, medium, or high risk (as evaluated during the Initiation Process).
- 2.) If there are any 5 – 5’s: when there is a 5 in the risk assessment **and** risk priority columns for a single risk element it signifies a risk element that should be focused on by the team and used to determine the makeup of the team members. For example, if you have a “5 – 5” in Project Schedule, the project team will want to have a schedule focused leader. If the “5 – 5” is in Technology, the project team will want to have more of an engineering focus.

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ADDITIONAL INFORMATION

If the team would like additional information on the Risk Based Graded Approach please refer to the link below. The user will be re-directed to Chapter 19 - Risk Management, from the Project Management Handbook.

http://www.dot.state.fl.us/projectmanagementoffice/PMHandbook/P1_Ch19.pdf