

# MxD COST PROPOSAL

## Project Participant Cost Development Guide

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### I. BACKGROUND

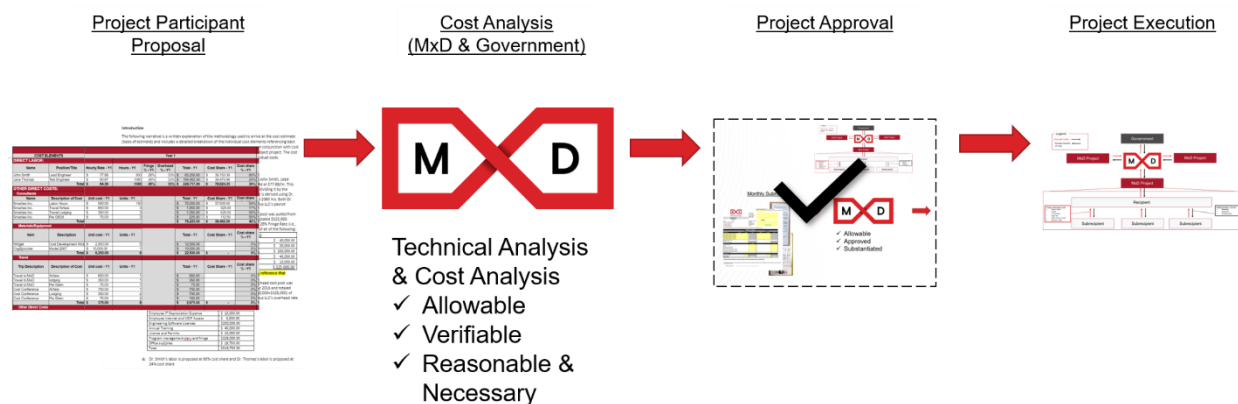
MxD projects are governed by a Technology Investment Agreement with the Government and are generally funded on a cost reimbursable basis. Reimbursement may be with Federal Assistance Funds or MxD Funds depending on the specific project call.

This guide is intended to assist Project Participants with developing an MxD cost proposal. Project Participants will be reimbursed for their costs incurred that are allowable, approved, and substantiated. To ensure that costs are allowable, verifiable, reasonable and necessary per 2 CFR 200 Subpart E, MxD conducts both a technical and Cost Analysis on every project proposed prior to award. In order to conduct this analysis, MxD needs a detailed cost proposal and cost proposal narrative from every Project Participant on the project.

**IMPORTANT:** Participant down selection and request from MxD for a cost proposal does not guarantee a project will be awarded. Proposals that deviate substantially from the guidelines or that omit substantial sections and that are not rectified quickly may be eliminated from further review and funding consideration.

### II. PURPOSE

This guide is intended to assist Project Participants in developing the costs that they propose such that they may be analyzed by MxD. By understanding what MxD's Cost Analysis requires using the recommended source documentation, Project Participants will help ensure that costs are sufficiently developed (and substantiated for Federally funded projects) when proposed. The goal is that the MxD Cost Analysis will be conducted in a timely fashion with minimal requests for additional information, allowing efficient project approval.



This guide covers the following:

- **Definitions**
- **Developing Cost**
- **Elements of Cost**

- **Certifications**
- **Populating the Template**

### **III. EXHIBITS**

The following Attachments are included in this PPK:

- Blank Cost Proposal Template (Excel document that identifies the costs)
- Blank Cost Narrative Template (Word document that describes the costs/substantiation)
- Example Project Cost Proposal
- Example Cost Narrative

### **IV. DEFINITIONS**

#### Technology Investment Agreement

An agreement between a Federal Agency and a non-Federal entity to award financial assistance to recipients for a public purpose (e.g. advancing manufacturing within the United States) and not to acquire property or services for the Federal Government. A Technology Investment Agreement differs from a grant in that it allows for substantial cooperation between the Federal entity, non-Federal entity, recipients, and the subrecipients. MxD entered into a Technology Investment Agreement, number W15QKN-19-3-0003, between MxD and the Army Contracting Command – New Jersey, the U.S. federal awarding agency.

#### Cost Analysis

Once the Project Participant(s) submit their proposals, MxD will conduct an analysis on both the technical aspects and the proposed costs. The Cost Analysis will look to determine that the estimated costs proposed by the Project Participant are in fact costs that are allowed by the Government, verifiable (real and supportable), and that they are reasonable and necessary. The Government will then conduct their own Cost Analysis.

#### Allowable/Unallowable Costs

Most costs that are proposed and incurred, if properly substantiated (when required), are allowable. However, there are costs that are unallowable by the Government. These costs can be found in 2 CFR 200 Subpart E and include items like alcohol beverages, fines and penalties, etc. These costs should be excluded from any proposal, billing, or claim on MxD projects. Any costs unallowable to claim for Federal reimbursement is also unallowable to claim as cost share.

#### Verifiable Costs

Project Participants should only include the costs they intend to incur to execute the project in their proposals. Project Participants should not include any profit or fee. For example, labor proposed by a Project Participant should be what the Project Participant pays its individuals and not the rates charged in a standard commercial transaction. Conversely, when a Project Participant purchases a commercial item from a vendor, there is no expectation that the Project Participant would be able to identify and obtain the item from the vendor at cost. The amount that the Project Participant pays the vendor is the Project Participant's cost and should be presented as such.

### Reasonable and Necessary Costs

A cost is reasonable and necessary if, in its nature and amount, it is what a reasonable person would expect to incur and pay in the normal course of business executing a specific task. There is no presumption that any cost, no matter its nature and amount is reasonable. The Project Participant and MxD have the burden of proof to the Government that the costs are reasonable and necessary as proposed and incurred.

**IMPORTANT:** *For projects that are NOT funded with Federal funds*, the Cost Analysis will not specifically require substantiating documents to be provided to MxD with the proposal. Rather, the analysis will rely on the cost proposal narrative to support the cost proposed. MxD will require the Project Participants to provide substantiating documentation when invoicing for reimbursement of costs incurred. The cost proposal narrative should discuss the sources used to develop the costs. See Table 1. In “Developing Costs.” **This differs from Federally-funded projects in which all substantiation needs to be provided and detailed to support the proposed costs.**

### Cost Proposal Narrative

A written explanation of the methodology used to arrive at the cost estimate (basis of estimate) to include a detailed breakdown of the individual cost elements referencing back to the substantiating documents used. The cost proposal narrative is necessary to properly understand and assess the Project Participant’s proposed costs to execute a specific project. The cost proposal narrative should discuss the sources used to develop the costs. See Table 1. In “Developing Costs.” Both federally-funded and non-federally funded projects require a cost proposal narrative from each project participant.

### Materiality

All costs proposed by a Project Participant must be addressed and the substantiation made available on request. However, the amount and the level of substantiation should be commensurate with both the dollar value and nature of the cost. The Project Participant should coordinate and communicate with MxD when unsure of how to treat cost that appear immaterial.

### Project Participant

Project Participants are MxD members that propose on and execute a MxD project call. In the context of MxD projects, Project Participants are further broken down into Recipient/Subrecipient relationship similar to a prime/subcontractor relationship in traditional contracting.

### Recipient

A non-Federal entity that receives the Federal Funds directly from the Federal Agency under the Technology Investment Agreement. Project Participants are not considered recipients until project approval. While MxD is the recipient under the MxD Technology Investment Agreement, in the context of *some* MxD projects the Recipient is the lead organization on a MxD project (similar to a prime contractor under traditional contracting).

### Subrecipient

A non-Federal entity that receives Federal Funds through the Recipient to carry out part of the Federal program specified under the Technology Investment Agreement. Project Participants are not considered subrecipients until project approval. While every Project Participant is considered a subrecipients under the Technology Investment Agreement, in the context of *some* MxD projects, subrecipients are Project Participants that report and propose through a lead organization or the Recipient (similar to a subcontractor in traditional contracting).

## V. DEVELOPING COSTS

All Project Participants (recipients and subrecipients alike) must provide a Cost Proposal Narrative that describes their basis of estimate and describes the associated substantiation used to develop the proposed costs to allow for an appropriate Cost Analysis to determine fair and reasonableness of costs. A thoroughly substantiated and supported cost proposal will expedite the Cost Analysis process and reduce the risk of requests for information from MxD and the Government. Additionally, Project Participants must complete a full cost analysis for each subrecipient proposal, submit all cost analysis documentation to MxD, and certify that proposed costs have been determined fair and reasonable.

**Note:** If at any time during the preparation of a proposal a Project Participant has questions about the process, the substantiation needed, or guidance of any sort please do not hesitate to reach out to MxD at [projects@mxdusa.org](mailto:projects@mxdusa.org). Addressing more issues prior to submittal greatly reduces the number of follow-up questions and expedites the review by MxD and the USG (where applicable).

The following are some best practices to consider when developing costs:

- Cost Proposal Narrative provides a description of the detailed methodology used to derive or calculate costs based on the supporting documentation
- Ensure the source used is current and relevant
- If using screenshots, save the full screen shot including address, date, and other information
- Invoices, quotes, estimates, etc. should be on official letterhead and signed
- If using spreadsheets or downloads out of a system, save screenshots out of the system showing totals, report names, dates, etc. that can be tied to the spreadsheet

### Proprietary or Sensitive

In certain instances, Project Participants may not wish to share sensitive or proprietary data with MxD.

- For projects funded through Federal funds, Project Participants should notify MxD and coordinate submission directly to the Government when required. MxD will reach out to the Project Participant and the Government to confirm that the Government is in receipt of the substantiation.
- For projects not funded through Federal funds, Project Participants should notify MxD .

### Development/Substantiation Challenges

For items that Project Participants have challenges supporting/substantiating (e.g. Table 1), the Project Participant should reach out and coordinate with MxD. Depending on the materiality of the items, MxD will work with the Project Participant to identify any alternative means developing the cost and or alternative substantiation.

### Sources of Cost / Substantiation Documentation

The Cost Analysis may require substantiating documents. Project Participants need to ensure that they base costs off of readily accessible substantiating documentation.

- For projects funded through Federal Funds this substantiation documentation must be provided with the proposal.
- For non-Federally funded projects, MxD may request specific substantiating documentation as part of its quality assurance measures or where the cost narrative is unclear or insufficient.

Table 1 below provides a matrix of cost elements, how to develop the elements of cost, and acceptable sources of information/substantiation to meet the cost element objectives.

<b>Table 1</b>		
<b>Element of cost</b>	<b>Objective</b>	<b>Recommended Sources of Cost Information/Substantiation</b>
<b>Direct Labor</b> <ul style="list-style-type: none"> <li>• <b>Fringe</b></li> <li>• <b>Overhead</b></li> </ul>	Develop the cost of direct labor and fringe proposed through Government approved, historical, average, or other data.	<ul style="list-style-type: none"> <li>• Direct labor rate agreement with the Government</li> <li>• Existing invoice to a Government customer</li> <li>• Publicly available payroll data where current</li> <li>• Labor distribution reports</li> <li>• Payroll data <ul style="list-style-type: none"> <li>• Identify annual hours worked</li> <li>• Support escalation factors over typical 3-5%</li> </ul> </li> </ul>
<b>Travel</b>	Develop the travel costs and identify any departures from Government published per diem rates	<ul style="list-style-type: none"> <li>• JFTR per diem rates and IRS mileage</li> <li>• Vendor Quotes for airlines and hotels in excess of Government approved rates with justification</li> <li>• Internal travel policies</li> </ul>
<b>Consultants</b>	Develop consultant costs, broken down by cost elements	<ul style="list-style-type: none"> <li>• Verified previous rate history statement from Government (SF 1420)</li> <li>• Previously approved Government Customer Invoice</li> <li>• Comparable costs (GSA, etc.)</li> <li>• Certification supporting methodology and cost (least preferable)</li> </ul>
<b>Materials</b>	Develop the cost to manufacture materials internally or to purchase them from an outside vendor	<ul style="list-style-type: none"> <li>• Vendor quote</li> <li>• Invoice</li> <li>• Purchase history</li> <li>• Internal transfer pricing/Standard Cost</li> </ul>
<b>Other Direct Costs</b>	Develop the other costs directly allocable to the project	<ul style="list-style-type: none"> <li>• Vendor quote</li> <li>• Invoice</li> <li>• Purchase history</li> <li>• Policies identifying standard costs e.g. University tuition reimbursement rates or equipment use rates</li> </ul>
<b>Indirect Costs</b>	Develop and allocate costs such as general and administrative or facilities and administrative costs to the specific project	<ul style="list-style-type: none"> <li>• Forward Pricing Rate Agreement (FPRA)</li> <li>• Negotiated Indirect Rate Agreement (NICRA)</li> <li>• Forward Pricing Rate Recommendation (FPRR)</li> <li>• Default 10 percent rate</li> <li>• Provide pools and bases that make up the indirect rates</li> </ul>

**NOTE:** While the sources of cost information/substantiation are not specifically required to be provided with non-Federally funded project proposals, the documentation referenced in Table 1 should be: used to develop the costs, referenced in the cost proposal narrative, maintained and readily accessible, and provided when invoicing for reimbursement.

## VI. ELEMENTS OF COST

Project Participants' cost proposals, to include subrecipients, are required to be broken down into and analyzed by the following cost elements in the Technology Investment Agreement:

- Labor
  - Fringe
  - Direct
- Travel
- Consultants
- Materials/Equipment
- Other Direct Costs
- Indirect Costs

[illegible]

## Labor

This is the actual cost of the labor to the Project Participant. This cost should be what the Project Participant pays its individuals and not the rates it would charge in a standard commercial transaction.

- Cost should be presented by individual/position at an hourly rate. If the Project Participant does not normally track these costs on an hourly basis and has to calculate the hourly, the Project Participant should document and provide its methodology.
- The labor cost must identify and support the percentage that is applicable to fringe benefits and overhead either as a separate percentage to be applied to the base rate or a verifiable percentage that is included in the rate.

The labor costs proposed must be discussed in detail in the cost proposal narrative referencing source documentation used and any methodologies necessary to derive the cost.

## Travel

These are estimated travel costs required to complete the project. Travel costs should be broken down by individual costs and trips (e.g. trip no. 1 airfare, trip no. 1 lodging). Support for estimated travel costs will be vendor quotes for airlines and hotels and Government published rates for mileage, Joint Federal Travel Regulations (JFTR) published per diem, etc. The Cost Analysis will look to verify that the costs presented support the number and duration of trips to include destinations and specific travelers. Refer to the “Unallowable” section for travel costs that are unallowable (e.g. the expectation is that airfare will be coach or economy class; upgrades are unallowable). The Cost Analysis will refer to JFTR identified per diem rates for reference and reasonableness.

## Consultants

These are costs associated with an individual or company that is retained to provide professional advice, goods or services on a project for a fee. Consultants:

- Provide the goods or services within normal business operations
- Provide similar goods or services to many different purchasers
- Provide goods or services that are ancillary to the operation of the research project
- Are generally not subject to monitoring or reporting requirements of the prime award

It is important to understand the distinction between subrecipients and consultant(s):

The clearest distinction is whether or not the Project Participant is buying goods or services or if they are outsourcing the responsibility for delivering the outcomes expected entirely. In the latter case, it is likely that the consultant(s) should really be considered a subrecipient(s).

Consultant costs should be broken out on a cost-by-cost element (i.e. labor categories, hours, travel and other direct costs). Cost narrative should reference the source of costs such as:

- Verified previous rate history statement (e.g. SF 1420)
- Previously approved invoice
- MxD service history
- Comparable rates (GSA, etc.)
- Quote
  - MxD requires direct quotes for any consultant costs exceeding \$150,000.
- Certification (least desirable option)

Subrecipients	Consultants
<ul style="list-style-type: none"> <li>• Perform a significant portion of the scope of work;</li> <li>• Collaborate in the project design/proposal development;</li> <li>• Provide scope of work and budget as part of the proposal prep;</li> <li>• Complete work promised and analyzes results found;</li> <li>• Collaborates on design;</li> <li>• Note: Facilities and Administrative (F&amp;A) (similarly referred to as G&amp;A on procurement contracts) costs apply only to the first \$25,000 of the sub-award.</li> </ul>	<ul style="list-style-type: none"> <li>• Do not participate/collaborate in project design/proposal;</li> <li>• Only perform specific services such as lab testing, report printing, etc.;</li> <li>• Do not perform analysis or evaluation or exercise discretionary judgment;</li> <li>• Note: F&amp;A costs apply to entire figure, regardless of total. These fees are considered "other direct costs" on the budget.</li> </ul>

## **Materials**

This is the cost of the materials that are being proposed for the project. Materials can generally be broken down into two categories:

- Prepared/manufactured in-house: These are standard manufacturing costs. Substantiation includes internal pricing documentation such as pricelists, internal chargeback documentation, internal quotes etc. or standard costing data.
- Purchased from a commercial vendor: These are items purchased through a commercial vendor. Substantiation includes vendor invoices and quotes.

The purpose/use of the equipment must be explicitly explained in the narrative for MxD technical review. Equipment purchased with Federal funds or claimed as cost share can only be used for the purpose/use indicated and cannot be repurposed without explicit approval from the Government.

Given the broad range of items that fall in this category, participants also must specify the units of measure being used to describe the material. For example, a software license needs to be clearly identified by license type (monthly subscription duration, days, bytes, users etc.)

Any methodology used to derive a material cost should be documented and any price list or quote used in the methodology should be referenced in the cost narrative.

MxD requires direct quotes and proof of bid from a minimum of 3 suppliers for any material, equipment, or applicable other direct costs exceeding a unit price of \$5000 or total price of \$25,000.

## **Other Direct Costs (ODCs)**

These are costs that are directly attributable to the project but do not necessarily fit any of the other cost elements. ODC cost should be supported through vendor quotes, price lists, any estimating procedures, policies etc. Any methodologies used to derive costs should be documented and any methodology should be documented in the cost proposal narrative.

### **Indirect Costs**

These are costs that are not typically attributable to a specific project and can include F&A and various overhead accounts. It is important that the Project Participant is clear on the buildup of the indirect rates and the pools used as well as specific on the base that the rates are applied to. Indirect rates can be referenced through:

- Forward Pricing Rate Agreement (FPRA)
- Negotiated Indirect Rate Agreement (NICRA)
- Forward Pricing Rate recommendation (FPRR)
- Indirect cost allocation pool(s) and base and the Project Participant's application of the costs

## **VII. CERTIFICATIONS**

Within the Cost Proposal Narrative, the Project Participants will include the following signed and dated certifications:

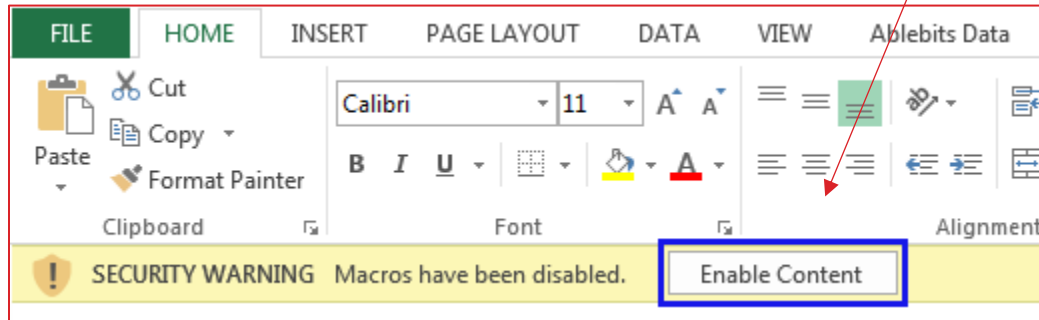
- **Unallowable costs:**  
*[Insert Project Participant Name] (the "Project Participant") has reviewed the cost proposal for project [Insert Project Name] (the "Project") in accordance with 2 CFR 200 Subpart E and certifies that to the best of its knowledge there are no unallowable costs included with the proposal. Project Participant acknowledges that if unallowable costs are included, Project Participant will not be entitled to reimbursement of such costs."*
- **Profit/fee:**  
*"Project Participant has reviewed the cost proposal for the Project and certifies that to the best of its knowledge the cost proposed do not include any profits, fees or proceeds to Project Participant. Project Participant acknowledges that if profits, fees or proceeds to Project Participant are included, Project Participant will not be entitled to their reimbursement"*
- **Cost source/substantiating/supporting documentation:**  
*"Project Participant has developed the cost proposal for the Project using available readily accessible documentation as referenced in the cost proposal narrative. Project Participant acknowledges that documentation will be required when invoicing for reimbursement of costs incurred and that a lack of substantiating documentation may cause Project Participant to be denied reimbursement of costs incurred."*
- **[For each subrecipient] Subrecipient Cost Analysis:**  
*"Project Participant has reviewed the subrecipient cost proposal for [Insert Subrecipient Organization Name] and had made the determination that the subrecipient has provided sufficient and complete cost detail. Based on the information made available to Project Participant, the proposed costs are allowable, verifiable, reasonable and necessary per 2 CFR 200 Subpart E, and the Cost Share to MxD cost allocation is appropriate for the effort. As a result of this analysis, Project Participant considers this proposal to be adequate as a basis for subaward."*
- **Authority:**



*“I acknowledge and agree that MxD will be relying on the foregoing certifications and I represent and warrant that I have the authority to make these certifications on behalf of the Project Participant.”*

## VIII. POPULATING THE TEMPLATE

MxD will provide Project Participants with a template to populate the proposed costs. This section provides specific details on using the template. Upon opening the template, the user should ensure that they click “Enable Content” to ensure that the built in functionality operates correctly.



The template currently consists of two work sheets:

### **Project Summary:**

Contains the high level details of the project including totals that populate from the details

Project Call Designation:		Proposed Project Name:	
Project Information			
Recipient Name	Comments/Notes		
Subrecipient Name			
Project StartDate			
Project End Date			
Project Duration			
Project Cost Information			
Project Cost	Federal	Cost Share	Total
Direct Labor	\$ -	\$ -	\$ -
Other Direct Costs	\$ -	\$ -	\$ -
Consultants	\$ -	\$ -	\$ -
Materials/Equipment	\$ -	\$ -	\$ -
Travel	\$ -	\$ -	\$ -
Other Direct Costs	\$ -	\$ -	\$ -
Subrecipients	\$ -	\$ -	\$ -
Indirect Costs	\$ -	\$ -	\$ -
Total	\$ -	\$ -	\$ -
Percentage	-	-	-
Project Points of Contact			
Principal Investigator		Administrative Contact	
Name:		Name:	
Title:		Title:	
Email:		Email:	
Phone:		Phone:	
Signature of an official authorized to obligate the institution contractually			
Print Name			
Title			
Date			

Enter project data into the white cells. Grey cells are locked and will carry the total over from the detail tab.

### **Cost Detail:**

Contains the specific costs broken down by element of cost across the entire project life

