**BENEFITS ESTIMATION**

1. **SCOPE**

This Quality Work Instruction (QWI) defines the Enterprise Project Management Office (EPMO) procedure for effectively developing project benefits estimates to improve the Information Technology (IT) Project decision-making process. Benefits with clear and realistic quantitative or qualitative value enable decision-makers to better understand the expected return on the project investment. The Benefits Estimation procedure is initially completed for all IT Projects as part of [0300-0310-005-C PROJECT INITIATION](https://it.nc.gov/media/1003/open) within [0300-0300-005-B PROJECT MANAGEMENT PROCESS](https://it.nc.gov/media/1002/open), and are tracked, updated and re-validated throughout the project life-cycle.

1. **OWNER**
   1. This QWI is jointly owned by the EPMO Director, and Office of State Budget and Management (OSBM) Information Systems Financial Analyst. No changes, additions or alterations may be made without the owners’ written approval.
2. **REFERENCE DOCUMENTS**

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| --- | --- |
| **DOCUMENT IDENTIFICATION** | **DOCUMENT TITLE** |
| 0100-0800-010-B | **FORMS AND RECORDS CONTROL** |
| 0300-0300-005-B | [PROJECT MANAGEMENT PROCESS](https://it.nc.gov/media/1002/open) |
| 0300-0300-005-C | [PROJECT INITIATION](https://it.nc.gov/media/1003/open) |
| 0300-0310-015-C | [PROJECT FINANCIAL ASSESSMENT](https://it.nc.gov/media/1006/open) |
| 0300-0310-030-C | [COST ESTIMATION](https://it.nc.gov/media/1022/open) |

1. **ASSOCIATED FORMS**

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| **FORMS IDENTIFICATION** | **FORM TITLE** |
| 0300-0310-015-D | [PROJECT FINANCIAL ASSESSMENT FORM](https://it.nc.gov/media/1007/open) |

1. **DEFINITIONS**

* **QUANTITATIVE MEASURE: *link to glossary and definitions***
* **QUALITATIVE MEASURE: *link to glossary and definitions***
* **IMPACT STATEMENT: *link to glossary and definitions***

1. **PROCEDURE**
   1. **Benefits Overview**
      1. Benefit Estimates are most effective when described in financial terms. Benefits for a chosen solution(s) represent the quantitative and qualitative results expected in return for IT Project costs incurred. Quantitative and qualitative measures provide context to support the decision-making process and generally reflect positive impacts to intra and inter-agency state operations, or to citizens/businesses when engaging state government.
      2. Benefits are listed and quantified/qualified in the Benefits Tab of the [0300-0310-015-D PROJECT FINANCIAL ASSESSMENT FORM](https://it.nc.gov/media/1007/open).
   2. **Quantitative Benefits**
      1. Quantitative benefits have a numeric value defined in either a financial (dollars) or relevant non-financial (but tangible) value.
         1. Financial benefits are described as either ***Hard*** (direct impact to budget), or ***Soft*** (indirect impact to budget). Soft financial benefits typically enable an agency to reallocate resources. Examples include:
            * *New Revenue (Hard)* - Increase in dollars that flow into the state over and above existing state appropriations.
            * *Savings (Hard or Soft)* - Areduction in the dollars necessary to meet customer established requirements *(Hard), or a* cost reduction that enables a manager to reallocate funds to meet other project related requirements (Soft).
            * *Cost Avoidance (Soft)* - A cost reduction that is not a savings but could reduce future costs. ***Example****: Whereas a solution that prevents or offsets a future budget expansion requirement is classified as a Cost Avoidance.*
            * *Productivity Improvements (Soft)* - A reduction in personnel time and effort required with an associated function or assigned task. Often, a productivity improvement will also result in a savings or cost avoidance.

*(****Note****: Classify Productivity Improvements that result in actual staff or material resource (Hard) reductions as Cost Reductions. Credit the Productivity Improvement within the Basis of Estimate column for the Cost Reduction versus a separate benefit line.)*

* + - 1. Non-financial benefit examples include:
         * Units produced or transactions processed (count)
         * System reliability in terms of probable failure ratio (mean-time-to-repair or average downtime)
         * Accuracy, timeliness, and completeness of data produced (rate or index)
         * Overall performance and operational effectiveness (rate or index)
  1. **Qualitative (Non-quantifiable) Benefits**
     1. Qualitative benefits do not lend themselves to direct and quantitative measures. They are generally described using a narrative form and ranked relative to other qualitative benefits based on impact to project goals and objectives. Although subjective in nature, qualitative statements contribute positively to the decision-making process. Examples include meeting statutory or regulatory requirements, attaining system compatibility or standardization, improving the user look and feel, quality, security, and safety. It is important to note that although some qualitative benefits may be quantified, the methods and resources required to produce useful measures may be impractical.
     2. Methods and measures may be available or developed to add meaningful context for qualitative benefits. Quality, security and safety benefits are often described in absolute or difficult to quantify terms such as, good, bad, acceptable or unacceptable. The Business Owner, Project Manager (PM) and project team should research all means and resources available such as industry data, lessons learned from similar efforts, or the practicality of developing data through surveys, etc.
  2. **Identifying, Estimating and Evaluating Benefits**
     1. Identifying Benefits. The Business Owner, PM and project team will:
        1. Identify and analyze all project resource and cost inputs and results.
        2. List all benefits and determine if they are quantitative or qualitative. Identify the quantitative measure that will be used to determine the benefit. If no quantitative measure exists, indicate how the benefit will be determined.

*(****Note:*** *All benefits must be relevant to project results and distinctly identifiable without overlap to others listed.)*

* + - 1. Categorize each benefit under one of the following Benefits Descriptions listed on the Benefits Tab in the [0300-0310-015-D PROJECT FINANCIAL ASSESSMENT FORM](https://it.nc.gov/media/1007/open): Business,

New Revenue, Citizen Facing, Technology and Operations, In-Kind Services, or Other. Within each category list the benefits in order by quantitative (financial), quantitative (non-financial), followed by qualitative. Examples for each category are as follows (see Appendix A for additional examples):

* + - * + Business - Examples include cost savings of labor due to efficiency, cost avoidance of labor increases required in lieu of the project, increased employee productivity, and savings due to elimination of state services or consolidation of state services.
        + New Revenue - Examples include systems that increase the ability of the State to collect taxes owed, and those that collect fees or subsidies (direct or indirect).
        + Citizen Facing - Describes how the project outcome impacts the State's citizens, businesses and other government agencies or entities. Examples include increased wages, long term employment, increased safety, and consumer access to State resources such as registration, license and/or permitting systems.
        + Technology & Operations - Examples include reduced service cost, maintenance or operating costs, increased performance, reduced downtime, cost avoidance and/or risk mitigation to contract penalties or extended warranties, and replacement of legacy systems.
        + In-Kind Services - Examples include vendor contract credits, loaned hardware and/or software supporting the project (e.g., through the Innovation Center).
        + Other - All other benefits to the State not categorized above.
    1. Estimating Quantitative Benefits. Make every effort to quantify benefits using the following measures: Dollars, Physical Count, Index or Ratio (percent).
       1. The approach and methods for estimating benefits are similar to those found in [0300-0310-030-C COST ESTIMATION](https://it.nc.gov/media/1022/open). In general, the Business Owner, PM and project team must gather data from appropriate sources, establish the appropriate data relationships, analyze the information, and ensure no overlap exists between individual benefit measures.
       2. The Business Owner, PM and project team determines when the benefit will begin to return value and to what extent (amount) based on the project schedule out to five Fiscal Year (FY) Operations and Maintenance (O&M) periods. The project team then documents these values under the appropriate column in the Benefits Tab (FY1, FY2, etc.) and records the Benefits Start Date.
       3. The project team documents the basis of their estimate for each benefit under the Basis of Estimate column, specifically how did the team arrive at the value for the measures to each benefit. In determining quantitative values for each benefit, the project team will make certain assumptions and judgments as part of the analysis process that will influence the results. These are also included for each benefit under the Basis of Estimate column.
    2. Evaluating and Recording Qualitative Benefits. Qualitative benefits are listed beneath all quantitative benefits, according to their appropriate category and ranked numerically by their relative importance/impact to the goals and objectives of the project. Use the following format in the benefits description column – “(1) Qualitative Benefit Name”. The project team then describes the basis, assumptions and judgments behind the qualitative benefit under the Basis of Estimate column.

*(****Note:*** *Qualitative benefits are most effective when the narrative includes an impact statement.)*

* + 1. The project team then provides a summary statement of the benefits in the Benefits Summary section at the top of the form.
    2. Examples of Benefits can be found in Appendix A.
  1. **Independent Review and Validation**
     1. Independent Review and Validation of Benefits. All IT Projects requiring independent review and validation of the cost estimates **will** include benefits as part of the assessment. The basis for Independent Review and Validation is found in [0300-0310-030-C COST ESTIMATION](https://it.nc.gov/media/1022/open).
     2. Evaluation of Alternatives. The Business Owner, PM and project team should also consider alternative means of achieving program objectives. This is done by researching the various options for providing the solution and roughly estimating the cost, benefits and risk of each option. The “Maintain Status Quo” alternative is always considered and used as the basis for comparison with the proposed solution.

1. **RECORDS**
   1. Unless otherwise specified in this Procedure/QWI, Records shall be maintained in accordance with **0100-0800-010-B FORMS AND RECORDS CONTROL** procedure.
2. **REASON FOR CHANGE**
   1. Updated EPMO Manager to EPMO Director.

**APPENDIX A: Benefits Examples**

