



# **PROJECT CODE OF ACCOUNTS**

**SAMPLE**

**AACE  
INTERNATIONAL  
RECOMMENDED  
PRACTICE  
20R-98**

**AACE**  
INTERNATIONAL



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## PROJECT CODE OF ACCOUNTS

TCM Framework: 7.1 – Project Scope and Execution Strategy Development  
7.2 – Schedule and Development  
7.3 – Cost Estimating and Budgeting

Rev. January 27, 2003

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*Disclaimer: The opinions expressed by the authors and contributors to this recommended practice are their own and do not necessarily reflect those of their employers, unless otherwise stated.*

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**INTRODUCTION**

This guideline establishes the basic principles of codes of accounts (COA) for projects in any industry. It examines key characteristics including usage, content, structure and format and describes benefits of establishing standard COAs. Topics such as activity-based costing and work breakdown structures as they relate to COAs are addressed. The issues of properly defining a WBS and how it should be structured are outside the scope of this guideline. COAs are applicable to all phases of the asset life cycle, however, this guideline specifically addresses the project execution phases of asset design development through to start of normal operation.

A project code of accounts is a coded index of project cost, resource and activity categories. A complete COA includes definitions of the content of each account code and is methodically structured to facilitate finding, sorting, compiling, summarizing, defining and otherwise managing information the code is linked to. The information is used to support total cost management practices such as cost estimating, cost accounting, cost reporting, cost control, planning and scheduling. Other names used for COAs are coding matrices, coding structures, charge accounts, asset or material classification accounts, value categories, cost elements, work breakdown structures, resource breakdown structures and activity breakdown structures.

**PURPOSE**

The purpose of this guideline is to establish a common understanding of the principles and characteristics of project COAs so communication is improved among stakeholders across all industries. It should be used to help cost management practitioners create or modify a COA to maximize its value. This guideline also provides the conceptual foundation for other recommended practices and standards that address project COA applications in specific industries.

Common understanding is important because all projects are the product of team endeavors in which the timely and accurate flow of project cost, resource, progress, and other information is essential to project success. Industry experience has shown that a large amount of time and resources are wasted in the effort to reconcile disparate project records, and project failures are often traced to poor communication. The practice of benchmarking project costs at a meaningful level of detail is a daunting task in some industries because of the lack of cost coding commonality.

**GUIDELINE METHODOLOGY AND BACKGROUND**

This guideline was developed using a practical rather than a theoretical approach. Actual COAs were gathered and dissected to identify core COA principles and attributes as they exist in the area of project cost management today. The detailed contents of the owner and contractor company COAs gathered are confidential. Some of the sample COAs have been published as "standards." They are described in Appendix A. The COA from the organization referred to as "benchmarking" is a format that 14 international process industry owner companies had agreed to use for the purposes of cost and resource benchmarking at the time the document was provided.

There are almost as many different codes of accounts as there are companies executing projects. For this guideline, 28 actual COAs were collected and analyzed as summarized in Table 1. Despite differences, there is

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sufficient consistency of COA principles and attributes among industries to provide confidence that the COAs collected are an adequate sample.

| Industries                | Number | Organizations            | Number |
|---------------------------|--------|--------------------------|--------|
| Environmental             | 2      | Owners                   | 7      |
| Utility                   | 1      | Contractors              | 11     |
| Oil & gas extraction      | 1      | Standards - professional | 6      |
| Offshore oil & gas        | 2      | Standards - owners       | 1      |
| Process - oil & gas       | 13     | Benchmarking             | 1      |
| Process - general         | 2      | Government               | 1      |
| Process - chemical        | 1      | Estimating software      | 1      |
| Process - pulp & paper    | 2      |                          |        |
| Mining                    | 2      |                          |        |
| Transportation - pipeline | 1      |                          |        |
| Construction - buildings  | 1      |                          |        |
|                           | 28     |                          | 28     |

**Table 1 – Number of COAs Examined by Industry and Source**

After identifying the attributes and characteristics of each COA, the content characteristics were listed in tables that categorize them by their prevalence of use. Breakdowns of most common content characteristics are shown in tables 6 and 7 later in the guideline. Content characteristics were categorized or ranked by prevalence of use as shown in table 2.

| Prevalence Group | Percent Occurrence in the Sample COAs |
|------------------|---------------------------------------|
| Primary          | Equal to or greater than 75 percent   |
| Secondary        | 50 to 74 percent                      |
| Tertiary         | 25 to 49 percent                      |
| Other            | Less than 25 percent                  |

**Table 2 – COA Content Characteristics Ranking Categories**

While this approach is not necessarily forward-looking, it is practical, and the core COA principles identified are expected to have lasting value. This and related guidelines will serve as a documented basis for AACE's cooperation with other industry COA initiatives particularly those of vendors and users of computer-aided engineering and design, enterprise and project planning systems, and accounting systems as they attempt to further integrate their products.

### BASIC PRINCIPLES OF CODES OF ACCOUNTS

The survey of industry COA practices identified some basic, common sense principles. The principles are listed below (the underlined words are key COA attributes that will be discussed further in the guideline).

#### 1. COAs serve many users and usages, but should have one master.

Project managers, estimators, schedulers, accountants, buyers, and other stakeholders all have strong and sometimes conflicting requirements for a project COA. The basic structure of a COA should be managed in a way that prioritizes and addresses user and customer needs, considers long-term and external consequences, and

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considers intra and inter-company standardization. A cross-functional team is best at managing a COA. Arbitrary changes by individual users should not be permitted although flexibility can be a planned aspect of a system.

**2. Project information content is limitless, but COA formats are always constrained.**

Every COA has constraints from a human comprehension standpoint or from limited data field capacity or criteria in information management systems. Constraints require compromises that favor using a team-managed COA approach. The COA team needs to include members with thorough knowledge of information management.

**3. A COA is a communication tool requiring structure and a dictionary like a language.**

COAs are by nature intended to reduce confusion. Random elements (arbitrary alpha-numeric, lack of hierarchy, etc.), words or acronyms weighted with connotations, unclear use of symbols, and other such practices increase confusion. Structure and format increases usability and providing definitions of all elements in a reference dictionary or similar document improves clarity.

**4. Standardization is always better in the long term.**

You can depend on change in your project organization and systems. When change occurs, the value of having a standard COA (with planned flexibility) will shine. Here are some typical outcomes from not having a standard COA.

- What used to be in-house work is now being turned over to a contractor. The contractor or vendor cannot make sense of or map your organization's COA to their accounts. Team meetings are consumed by arguments about report content.
- A contractor's COA needs to be mapped to the owner's COA to meet other corporate reporting requirements and there is no way to accomplish it without reviewing every code definition of both companies to determine how they correlate.
- You are going to do a project just like one completed years ago, but you cannot make any sense out of the COA that was used on that past project; you miss some important cost items.
- You're expected to benchmark your company's performance with peer companies, but you can't participate in benchmarking groups in a meaningful way because you can't share data in a standard format.
- You've been merged into or must collaborate with another group and need to roll-up your costs/projects with theirs, but it will take months to convert them to a similar basis.

#### **ATTRIBUTES OF CODES OF ACCOUNTS**

The principles above consider four attributes of a code of accounts. These attributes are:

- usage;
- content;
- structure and format; and
- standardization.

When evaluating, creating, or modifying a COA, these attributes should be considered within the context of your project system circumstances and requirements.

**Usage of Codes of Accounts**

There are many uses of a project codes of accounts. Some of these are:

- classifying estimate items, budgets, and expenditures for cost control and capitalization;
- facilitating estimating and analysis of project cost data;
- summarizing cost data;
- assigning responsibility for budgets;