

**CHAPTER 6**  
**ELEMENTS OF FULL COST**

0601 ELEMENTS OF FULL COST

060101. Full Cost

A. A project’s costs for procurements, Civil Service labor, and travel are all considered direct costs to that project. Indirect costs of a project include Service Pools and Center G&A. All indirect costs incurred by NASA must be assessed back to the projects. The full costs of projects within any given operating year are represented by the sum of the direct costs and indirect costs.

B Total Program/Project Cost. The full cost of a project is the sum of direct costs, service pool costs, and G&A costs associated with the project. There are six basic types of cost identified to a project. These costs can be classified into two major categories.

Direct Costs	Indirect Costs
Procurements	Service Pool Costs
Civil Service Labor	Center G&A
Travel	Corporate G&A

Table 6-1, Cost Classification

060102. Direct Cost. Direct costs are costs that are obviously and/or physically related to a project at the time they are incurred and are subject to the influence of the project manager. Examples of direct costs include contractor-supplied hardware and project labor, whether provided by Civil Service or contractor employees.

060103. Indirect Costs. Costs that cannot be specifically and immediately identified to a project, but can subsequently be traced or linked to a project and are assigned based on usage or consumption. The three main groups of indirect costs are:

- A. Service pool costs
- B. Center G&A
- C. Corporate G&A

060104. Corporate G&A Costs

A. Corporate G&A cost will include all indirect program/project, non-service pool, and non-Center G&A costs that occur. Program/project budgets will be reduced for the Corporate G&A costs prior to distribution to the Centers. Therefore, these costs are not controllable at the Center level. Additional Corporate G&A costs are incurred at the Centers, but are assessed to the Agency Level prior to assessment back to the Agency Program Level.

B. Corporate G&A Rate

1. The Corporate G&A rate is calculated as follows.

$\text{Corporate G\&A Rate} = \frac{\text{Total Corporate G\&A Costs (\$)}}{\text{Total Project BA (\$)}}$
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Figure 6.2, Corporate G&A Rate Formula

\* Total Project BA is the sum of a new budget authority (BA) for all direct cost elements for Projects (procurements, Civil Service salaries and benefits, and travel plus service pool costs . Center and Corporate G&A are not included in the total agency BA.

2. Allocation of Corporate G&A will occur on a monthly basis. Corporate G&A costs are allocated to projects based on each project's proportion of total Agency project dollars. Allocation of Corporate G&A will be made at the level of the program Work Breakdown Structure (WBS). The Corporate G&A assessment cycle assesses accrued Corporate G&A costs only to the direct fund centers that contributed direct budgetary resources to the Corporate G&A pool. Each period's assessments in turn are based on fund centers' proportional contributions to the cumulative budgetary resource level in the Corporate G&A pool (where only fund centers that contributed receive a share of the period's assessment). Allocation of Corporate G&A will occur on a monthly basis.

3. NASA Headquarters, Office of the CFO, will issue the Corporate G&A rate via memorandum to the Centers' CFOs and Deputy CFO for use in developing and charging external customers through reimbursable orders. This memorandum will be issued on an annual basis.

4. Centers may not incur obligations or process offsets against Corporate G&A collected from customers. Collections for Corporate G&A must be forwarded to NASA Headquarters, Office of Institutions and Management. When advance payments are received for reimbursable work, the Corporate G&A cost pool will be funded in advance before work commences. If no advance payment is received, the Corporate G&A cost pool will receive funding once NASA has been reimbursed for work performed.

5. Waivers of Corporate G&A must be approved by NASA Headquarters, Headquarters Operations.

C. Corporate G&A Rate Formulation Example

Total Corporate G&A Costs (\$)		Total Agency BA (\$)	
Corporate Management	\$300M	Project 1	\$40M
Chief Engineer	\$80M	Project 2	\$95M
Agency Operations	\$190M	Project 3	\$25M
Corporate Security	\$100 M	Project 4	\$30 M
Other Items	\$70 M	Other projects	\$13,358 M
<b>Total Corporate G&amp;A</b>	<b>\$740M</b>	<b>Total Agency BA</b>	<b>\$13,548 M</b>

Corporate G&A Rate =	Total Corporate G&A Costs (\$740M)	x	100	=	5.5%
	Total Agency BA (\$13,548M)				

Allocate Corporate G&A Costs to Project A			
	Corporate G&A Rate (%)	Project BA (\$)	
Project 1	5.5%	x \$40M	= \$2.2M

Figure 6.3 Calculation of Corporate G&A

060105. Construction of Facilities (CoF) Costs

A The CoF program is currently funded using both institutional and programs funds at all NASA location.

B. Program/project budgets will be reduced for the institutional CoF costs prior to distribution to the Centers.

C Cost is determined by the actual contract amount awarded for the project and is recognized based on contractor billings as work is performed. Cost categories include labor, materials, travel, overhead, and Supervision, Inspection, and Engineering Services (SIES).

D. The CoF costs will be allocated utilizing the same methodology as Corporate G&A.

E. Service pool reports that will provide information regarding CoF cost assessed to Center projects are available on-line at <http://olqr-cf.ifmp.nasa.gov>.

060106. Center G&A Costs

A. Center G&A

1. The costs of many Center activities, such as the Center Director and his or her immediate staff, Center Management, Center Operations and Systems Management, will be managed through a Center pool and allocated to individual projects. Center G&A includes all general and administrative activities required to operate and maintain a Center regardless of programs and projects carried out at the Center. Center G&A support costs include civil service personnel and travel, support service contracts, supplies, equipment, and other goods and services necessary to carry out the general and administrative functions of the

Center. Center G&A costs will be allocated to projects based upon on-site workforce, i.e., Work Force Equivalents (WFEs), which includes on-site civil servant Full-Time Equivalents (FTEs) and contractor Work Year Equivalents (WYEs). The term “on-site” as used here, includes situations where the Center CFO, with approval of the Center Director, designates personnel located outside the gate as “on-site” because a significant amount of Center G&A services are utilized by that program, project or organization. A list of Center G&A functions is provided in Appendix 1, of this volume.

2. Center G&A will be funded through budget transfers from fund centers in order for service pools to perform their services. The budget funds transferred to Center G&A will remain in the pools unless agreed by the Center G&A Manager or Center Director.

3. If a program/project receives approval for any reason to discontinue receiving assessments from Center G&A, the program/project will still be required to pay termination costs. G&A costs will, at a minimum, be required at planned levels for the duration of the operating year.

B. Center G&A Rate

1. The Center G&A rate is calculated as follows.

$\text{Center G\&A Rate} = \frac{\text{Total Center G\&A Costs (\$)}}{\text{Total Center Onsite Direct + Service Pool Work Force Equivalents (WFE)*}}$
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\* WFE equals the sum of all on-site Center program/project staff Civil Service Full Time Equivalents (FTE) plus the entire Center service pool workforce required to support the program/ WFE is the sum of all Civil Service FTE's excluding Center G&A FTE's plus the contractor WYE's.

Figure 6-4, Center G&A Rate Formula

2. Allocation of Center G&A will occur on a monthly basis. Center G&A costs are allocated to projects based WFE's. WFE equals the sum of all the center program/project staff Civil Service Full Time Equivalents (FTE) plus the entire center service pool workforce required to support the program/projects (FTE) and contractor Work Years Equivalents (WYE). Center G&A must be allocated to the project level WBSs (Level 1).

Total Center G&A Costs (\$)		Total Number of Onsite WFEs	
Salaries/Benefits	\$20M	Project A	130 WFEs
Center Management	\$10M	Project B	20 WFEs
Security	\$2 M	Program 1	18 WFEs
S&MA	\$8 M	Program 2	12 WFEs
Other Items	\$8 M	Other programs/projects	1020 WFEs
<b>Total Center G&amp;A</b>	<b>\$48M</b>	<b>Total Onsite WFE</b>	<b>1200 WFEs</b>

Center G&A Rate					Total Center G&A Costs \$ 48 M
\$40,000 per WFE	=	$\frac{\text{Total Center G\&A Costs } \$ 48 \text{ M}}{\text{Total Center Onsite Direct + Service Pool Work Force Equivalents (WFE)*}}$			1200

Allocate Center G&A Costs to Project A			
	Center G&A Rate	Onsite WFE	
Project A	\$0.040 M/WFE	x 130	= \$5.2M

Figure 6-5, Center G&A Calculation

3. It will be necessary throughout the operating year for each Center to review expenditures and revenues of each Center G&A sub-pool against the remaining current operating year’s requirements in order to determine if all costs of the sub-pool will be adequately recovered through assessments from the customers (projects) based on current rate. Variances in projected sub-pool spending may require adjustments to the rates being used to assess cost to programs/projects.

4. Accurate and complete reporting on a monthly basis is the standard practice for NASA. Agency, Mission Directorate, and Center management will utilize Erasmus reporting monthly to assess the overall health of development projects. In order for this information to be complete and timely, all NASA elements (projects, service pools, Center G&A and Corporate G&A) must submit and maintain financial data every month. Projects and sub-pools are required to record and manage all direct costs in the Core Financial (CF) module of the Integrated Financial Management (IFM) system while tracking all costs (direct, service pool and G&A) in the Business Warehouse (BW).

060107. Service Pool Costs

A. Service Pool

1. Service pools are a means of accumulating and distributing similar costs that can not be directly associated with a particular project at the time the costs are incurred. These costs are subsequently distributed to projects by an assignment or allocation methodology that best represents the types of costs in the pools.

2. Service pools should be established when they are of material amounts, provide useful management information, allow ease of administration, and will

continue to be viable and stable over the long term. The benefits received from each service pool should outweigh the cost of establishing and maintaining that pool.

3. Service pools will be funded through budget transfers from fund centers in order for service pools to perform their services. The budget funds transferred to the service pools will remain in the pools.

4. All service pool costs will be assigned as quickly as possible but not less frequently than monthly either to a specific project, to another service activity or to a G&A activity. Service pool cost will be assigned to programs and projects, with the exception of the Facilities (F&RS), and Information Technology (IT) service pools, which will assign costs to other service pools and Center G&A, in addition to projects.

5. If a program/project receives approval for any reason to discontinue receiving service from a service pool, the program/project will still be required to pay termination costs. Service pool costs will, at a minimum, be required at planned levels for the duration of the operating year.

#### B. Standard Service Pools

1. The approved standard Center Service Pools are as follows. The functions of the standard service pools are defined in Appendix 2 to this chapter.

- a. Facilities and Related Services (F&RS)
- b. Information Technology (IT) Services
- c. Science and Engineering (S&E) Services
- d. Fabrication Services (FS)
- e. Test Services (TS)
- f. Wind Tunnel Services (WTS)
- g. Independent Technical Authority/Safety and Mission Assurance Office (ITA/SMA)

2. A Center must use the standard service pools unless it is clear that the cost of operating a particular service pool exceeds any accruing benefit or a Center does not conduct activities as defined by the standard service pools. Some Centers may need one or more service activities, in addition to the standard activities for reflect mission or organizational differences. The Center CFO is responsible for providing written requests to the Agency CFO for any deviations (additions or deletions), including sub-pool definition, from the above standard service pool list each year prior to Program Operating Plan (POP) submission. The Agency CFO must approve such additions or potential alternative approaches. If approved, the

affected Center service sub-pools must still roll-up to and be mapped to the standard service pools for comparison and benchmarking purposes.

3. It is important to note that the objective of standard service pools is not to attempt to standardize Centers' organizational structures or approaches to delivering services. Rather, the objective is to achieve standardization in how Centers budget and account for these services. . Regardless of the organization and approach used by a Center to provide a service, such as information technology services, the Center will account for information technology service costs using either a service pool or a service account methodology. The service pool methodology accumulates costs in a cost pool and is assigned to benefiting projects based on consumption.

#### C. Service Level Agreements (SLA)

1. Each project manager (customer) at a Center must enter into negotiated agreements with the service pools managers (providers) for products and services required to support his or her project. The negotiated level and type of service must be documented in sufficient detail to serve as a "contract" for an operating year's work. This is referred to as a Service Level Agreement (SLA). Project managers are responsible for providing funding to the service pools based on the terms of the SLA. The service pool managers are responsible for providing services consistent with the SLA.

2. The SLA must be developed annually and updated as necessary to correspond with major changes in the project's scope or schedule.

3. In the event of a rate change, customers must pay the increased costs generated by those increased rates where applicable. In addition, if consumption of a particular product or service increases, the customer is responsible for the increased cost associated with the additional consumption. However, if consumption is less than specified during the SLA negotiation process, customers may be liable for the full value of the agreement in those instances where the revenue associated with a particular agreement is necessary to cover the fixed costs of the pool.