

BRIEFING PAPERS[®] SECOND SERIES

PRACTICAL TIGHT-KNIT BRIEFINGS INCLUDING ACTION GUIDELINES ON GOVERNMENT CONTRACT TOPICS

Contracting For Services: Part I—Conceptual Definition And Model

By *Vernon J. Edwards**

The Federal Government primarily categorizes its acquisitions as supplies, services (other than research and development), research and development (R&D), and construction. The Government acquires services because it has chosen to rely on contractors to do much of the work it must do for the American people. According to the Federal Procurement Data System (FPDS), services accounted for the largest categorical share of the Government's contract obligations in Fiscal Year 2023, and professional services other than research and development accounted for the largest single share of service obligations (\$108.6 billion).¹ But while the Federal Acquisition Regulation (FAR) provides general definitions of supplies, construction, applied research, and development,² it does not provide a general definition of services.

This BRIEFING PAPER is premised upon the belief that a conceptual definition of services and a conceptual model of services contracting based on such a definition would be useful to those engaged in the specification and acquisition of services. Thus, the objective of this PAPER is to make an attempt at such a conceptual definition and model—something to think about and discuss.

The author's objective is not to prompt changes in Government acquisition policy and the Federal Acquisition Regulations System. Nothing herein anticipates such changes nor, given the absence of leadership in the Government's acquisition policy and training communities, are any such changes likely in the near term. Rather, the objective is to communicate some ideas that may be helpful to those engaged at the working level in service requirements analysis, service specification, and service acquisition planning.

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This BRIEFING PAPER will be published in two parts. This first part will propose a conceptual definition and model of services based on the work of scholars in the fields of economics and marketing and then discuss some of its implications for services requirements analysis. The second part will address practical applications.

What Is A Service?

English language dictionaries provide several definitions of service. For example, see THE OXFORD ENGLISH DICTIONARY, sense II: “The action of servicing someone or something, the work or duty of a servant, and related senses.” See also THE AMERICAN HERITAGE DICTIONARY OF THE ENGLISH LANGUAGE, 5th ed., sense 1.a.: “Work that is done for others as an occupation or business,” and sense 4.a.: “Employment in duties or work for another, as for a government.” But those definitions are lexical, not conceptual. They do not reveal anything about the nature of services.

Economists and marketing experts have worked on developing a conceptual definition of service for many years in order to distinguish goods from services for analytical and classification purposes, but they have not reached a consensus. The FAR does not define service, and the definition of service contract in FAR 37.101 does not state what services are other than indicating that they somehow involve “time and effort” but do not involve delivery of an end item of supply. But in 1977 the economist T. Peter Hill published a definition of service that at-

tracted much notice and prompted much commentary:

A service may be defined as a change in the condition of a person, or of a good belonging to some economic unit, which is brought about as the result of the activity of some other economic unit, with the prior agreement of the former person or economic unit.³

According to Semantic Scholar, Hill’s article has been cited 571 times, including 21 citations considered “highly influential.”

In 1999, the Office of Management and Budget’s Economic Classification Policy Committee published a conceptual definition of services based on and citing Hill’s definition:

A service is a change in the condition of a person, or a good belonging to some economic entity, brought about as the result of the activity of some other economic entity, with the approval of the first person or economic entity.⁴

In this BRIEFING PAPER, service is defined as follows:

A service is the work of a Government contractor to produce a contractually specified change in the state (condition or circumstances) of some designated object (a person, a group of persons, an organization, an item or set of items of personal or real property, a set of circumstances, information, or an idea).

Thus, conceptually, the six elements of a service are:

1. a Government agency—the customer;
2. a contractor—the service provider;
3. one or more designated service objects;

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4. object states—initial and specified;
5. a service production process; and
6. a service product—also called the result.

A designated service object is something that the Government wants a contractor to change in some specified way. It is the thing that the contractor works on—a person, a group of persons, an organization, an item or set of items of personal or real property, a set of circumstances, information, or an idea. When a service object is a person, that person might also be considered a service beneficiary. The Government buys the service and is the customer, but the beneficiary receives the service.

A service object's state is the set of pertinent facts about the object's condition and circumstances at a specific point in time, including pertinent attributes of the object itself and pertinent attributes of the circumstances that encompass it. The object's state will change during the course of service production. The service object's initial state is the set of pertinent facts about the object's condition and circumstances that exist or are expected to exist at the point in time at which the contractor encounters it—the state that must be changed in a specified way. The service object's specified state is the Government's description of the condition and circumstances that it wants the contractor to produce in the object.

The service contractor's production process is the set of steps it will take to produce the service object's specified state. It is the work—labor, procedures, methods, and techniques—the contractor does to bring about the required change in the service object. It is what people think of when they refer to “performance” of the service.

The service product is the final object state produced by the contractor. It is the basis for determining the acceptability of the service. It is also referred to as the outcome or result of the service.

Mere Effort Is Not A Service

This BRIEFING PAPER refers primarily to service *pro-*

duction rather than service *performance*. Service as defined herein is the work done to “produce” a specified change in a service object's state. The result of that work is the service product, and that product is what the Government wants, that which possesses the value for which the Government is willing to pay. Service “performance” is a contractor's act of production. Performance is not the service product.

The value and acceptability⁵ of a contractor's service product are determined by comparing the service object's produced state with the specified state. A service contractor's product is acceptable if it conforms to the Government's specification. When a service contractor is “performing” it is presumably working to produce the specified state.

For example, suppose that a contractor is operating a call center for an agency that provides benefits to eligible citizens, say, veterans or social security recipients. The purpose of the call center is to provide information and advice needed by those citizens. The citizens are the service objects and the purpose of the service is to change their state from being uninformed to being satisfactorily informed about prospective benefits. The Government wants the citizens to be satisfied with the information they are provided, and it wants the contractor to produce that state of satisfaction in those citizens, as will be evidenced by the results of a customer survey completed at the end of a call session.

The contractor's obligation is to produce in citizen users some specified average level of satisfaction throughout the contract period of performance, as indicated by inspection of customer survey results and complaints. That state of satisfaction is the contractor's ultimate product, which, in the foregoing example, is to be produced continually throughout the contract period, not just by the end of the contract. That is where the value of the service lies and is what, presumably, the Government wants to pay for. The effort put in by the contractor—hours of management and employee labor—count for nothing if citizens users are dissatisfied with the call center operation.

Measures of effort, often stated in terms of labor hours expended, are measures of production activity, but they are not measures of the change produced. Effort that produces an unacceptable product is unacceptable service. If a contractor tries (makes an effort) to produce a specified change but does not succeed, then the buyer has not received the specified service. The value of a service lies in the contractor's product, not in its effort to produce it. The Government does not, contrary to common expression, buy hours, even if its contracting officers think so.

Market practice may require a buyer to pay a contractor for effort that does not produce the specified result by entering into a cost-reimbursement, labor-hour, or time-and-materials contract. Such contracts are risk allocation devices. But if a service buyer agrees to pay a contractor for its effort, regardless of the result, we should assume that it did so because market practice gave them no choice. (Service pricing will be discussed in Part II of this BRIEFING PAPER.)

A level-of-effort or term form service contract is an exception to the above.⁶ It is one in which the Government does not specify the desired object state but says that the contractor is to do so much work and then deliver whatever result it produces.

In some cases, the acceptable conduct of a specified process constitutes, *ipso facto*, production of the desired change. (An "acceptable process" is acceptable in terms of both design and execution.) In services such as psychiatric treatment or physical training an hour of acceptable treatment or training is, *ipso facto*, a valid measure of change in the service object. The changes in such cases are that an untreated patient has undergone a period of acceptable treatment and an untrained person has undergone a period of acceptable training, the experience of undergoing the process being the specified change. If a contractor does not competently conduct an acceptable process, then it has not produced the specified service.⁷ Whether an acceptable process

"works" depends mainly on the response of the patient or trainee to the process. What this reveals is the contradiction sometimes inherent in the FAR instruction: "Describe the work in terms of the results required rather than either how the work is to be performed or the number of hours to be provided."⁸ Sometimes, process is the result.

A Conceptual Model Of Services

Based on the foregoing we can produce a conceptual model of service production, as follows: A service contractor is hired to change something about something. It thus encounters a service object in some initial (preproduction) state and works to produce the specified change. For example:

- a malfunctioning item of equipment is to be repaired so that it functions as it should;
- the dirty floors of a dining facility are to be cleaned;
- a facility that is not secure from unauthorized entry is to be secured;
- office personnel that need help in the use of their computers are to be provided help;
- outdated software is to be updated;
- an organization lacking information about something is to be provided additional information;
- taxpayers lacking information they need to file their tax returns are to be provided the information they need; or
- an organization lacking enough staff to conduct its operations is to be provided additional "support" staff.

Thus, a conceptual model for a statement of a service contract requirement might be:

Do something to something in order to change it as follows . . .

The requirement is written as an imperative sentence. The subject of the sentence is the contractor. The predicate includes a transitive verb specifying what is to be done (e.g., repair), a noun phrase identifying the object of the verb (e.g., a malfunctioning transmitter), which is the service object, and a predicate complement describing the object state to be produced (e.g., so that it functions properly).

The Government's greatest challenges during service requirement analysis are (1) to identify the service object(s), (2) to describe or forecast each service object's initial state (the object's known or forecast attributes and circumstances when first encountered by the contractor), and (3) to describe the service object state that it wants the contractor to produce. To meet those challenges, the Government must engage in service object identification, characterization, and specification (description). It must be able to (a) forecast and describe initial states and (b) specify desired states, because that information is what informs the service contractor of the work it will have to do and enables it to estimate the costs it will have to incur.

But description is difficult, even for trained technical writers. And lacking such writers—and persons with the ability to forecast and describe service object initial and desired states—Government personnel typically resort to process specification, which is contrary to the tenets of the performance-based acquisition policy, which instructs them to “Describe the work in terms of the results required rather than either how the work is to be performed or the number of hours to be provided.”⁹ The Government launched its performance-based acquisition movement during the mid-to-late 1990s without a sound conceptual model of services, and it did not effectively train its acquisition personnel how to conduct service requirements analyses and prepare service specifications (the so-called performance work statements).¹⁰

Modes Of Service

Services may be usefully categorized as (1) jobs, (2) projects, or (3) operations. While the distinctions among jobs, projects, and operations are sometimes fuzzy, the categorizations can be useful during service requirements analysis, work statement preparation, and contract design, topics that will be discussed in Part II of this BRIEFING PAPER. What follows is an attempt to define those categories.

Jobs and projects entail the one-time performance and completion of specific work by a specified date or within a specified period of time, from start to finish. Operations are categories of ongoing work—e.g., maintenance or security—performed continuously or continually, usually in support of some Government facility or installation.

Jobs, as the term is used in this BRIEFING PAPER, include short-term work, generally involve the performance of a single task, require the production of a clearly specified service object state, and generally do not require close coordination between service buyer and service provider. Examples of jobs include repair of an item of equipment, tree planting at a specific logging site, simultaneous foreign language interpretation during a meeting, veterinary treatment of feral horses rounded up from public lands, and the removal of storm debris from a Government site.

Projects are complex jobs, longer in term and involving the completion of sequential, interdependent, and concurrent tasks, and may entail close cooperation, consultation, and coordination between service buyer and service provider. Examples include the design of a new facility, device, or system; the conduct of a long-term and large-scale environmental study; wildland firefighting; rescue; and large scale disaster recovery.

Operations require the ongoing production and maintenance of multiple and various object changes of state throughout some period of time, usually, because of contract funding rules, 12 months at a stretch. Such services may entail the performance of

multiple tasks throughout the contract period. Operational services are usually associated with a Government facility or installation of some kind and are required as long as the facility is in operation. The facility or installation is the service object. Operational services fall into three general subcategories:

1. continuous (without interruption) maintenance of object state;
2. continual (with scheduled or intermittent interruptions) maintenance of object state; and
3. cyclical returns to object state.

Physical security and communications are examples of continuous (24/7) maintenance of desired object states. The service is that a facility that would otherwise be unsecured and without communications is secured and can communicate, and the service buyer wants those states to be uninterrupted. The service provider must act in ways that will ensure that they remain so. There must be no lapse in service. Lapses are prevented, if possible, by taking measures during the course of operation, such as periodic changes of guards, maintenance of surveillance and communication systems, locking spaces, closing entrances, and conducting security inspection patrols.

Continual operations are subject to interruption intermittently or as scheduled. A contractor-operated concession at a national park may be shut down periodically for cleaning, repairs, maintenance, or emergency closures. Other continual operations are shut down due to weather or on holidays. A campground operation might be shut down for an unscheduled cleanup or wildlife or wildfire threat.

Cyclical services are performed repetitively, as scheduled or requested. They include janitorial services, waste collection and removal, dining hall operation, grounds maintenance, and other house-keeping services. Such services are required due to routine deterioration of the service object after use or the passage of time—dining tables and dining hall

floors become “dirty,” waste containers become full, and grass and bushes grow, and they must be attended to periodically.

What Is A Task?

An important concept in services acquisition is the concept of a *task*. The FAR does not define task, despite the fact that the word appears in 167 places in the regulation. Ordinary dictionaries define it as “a piece of work” or “a function to be performed.”¹¹ A specialty reference defines it as, “A discrete unit of work that is expected to produce a specific result.”¹² The word is often used as a synonym for job, less often as a synonym for project. It may refer to a specific component, element, or part of a job or project. Every task has a specified beginning, end, and product. As such, tasks might be performed sequentially or concurrently. Subordinate components of a task are often referred to as subtasks, each with its own specified beginning, end, and product.

In a service contract, a task is a requirement that the contractor do something to something (a service object or set of such objects) to change it in a specified way. Such a requirement should be stated in an imperative sentence in which the subject is the contractor, the predicate includes a transitive verb phrase stating the action that the contractor must take, a noun phrase specifying the object of the verb, and a predicate complement describing the result to be produced. To wit, in general form: *Do this to this in order to produce this effect.*

All of the foregoing terms appear in service contracts. None of them are precise or used consistently. But by trying to sort them out and define them we are forced to think things through and eliminate vagueness, ambiguity, disagreement, and conflict.

Characteristics Of Services

Services have specific features that distinguish them in some ways from goods. Those features include the following:

Observability of performance. The production of many services may not be directly observable by the customer because they are entirely or predominantly mental. While many services, such as equipment maintenance or repair, involve observable physical effort and produce a tangible result, many other services involve mainly or entirely mental effort, do not entail directly observable physical labor processes, and do not produce a tangible (i.e., material) result other than documentation. Examples include analysis and surveillance. (A person sitting at a desk looking at a screen or a piece of paper or staring into space may be thinking about the problem at hand or daydreaming.)

Conditions of production. For the manufacture of goods (supplies, products), shops, garages, and factories provide controlled working conditions and enable the development and use of standard production processes. But while many services are produced under controlled conditions in offices, laboratories, or shops, many must be performed “on the spot.” A service production process that works well at one location under one set of conditions may not work well or at all at a different location under different conditions. They may thus require innovative process adjustments, adaptations, and deviations to produce a specified change. In such cases, the Government and its contractor must be able to improvise, adapt, and overcome as necessary.

Customer involvement during production. In the market for standard commercial products and services the customer is generally not involved in the service provider’s production process. The customer orders the products or services in question, and receives, inspects, and accepts or rejects the product or result. When buying custom products and services the customer may be actively involved in observing and directing production and in quality surveillance and control. Difficulty in the specification of a desired service results may induce the customer to instruct the service provider as the work proceeds in order to “steer” it to the desired result.

People as service objects. When the service object

is a person or group of persons and humans are doing the work of service production, there is the problem of human interaction (chemistry) and of no two persons being exactly alike or having the same expectations. To what extent is the service provider expected to adapt to each personality, temperament, and peculiarity and to each set of beliefs and attitudes? To what extent does “bedside manner” count when assessing the quality of the service? In these cases, there is a third party involved besides the customer and the service provider—a service beneficiary—who must be assessed and dealt with appropriately. Examples are Internal Revenue Service and Social Security call center services.

Requirement-Process-Result Heterogeneity

A given service may vary in outcome depending on the natures of the service objects and their initial states. This is especially true when the service objects are human beings, but it can be true in any case due to variations:

A common service varies according to the content, nature and requirements of each customer. It may be varied according to different quality standards associated with different costs; services can be varied across regions or cultural background; services can be fluctuated by different characteristics of providers. Therefore, heterogeneity referring to the multifaceted different experience that may be had from a single type of service is considered as a factor to distinguish goods and services.¹³

Heterogeneity raises questions about how standards of quality should be specified, whether as point values or range values.

A janitorial service may require nightly vacuuming of carpeted office floors. In one room there is seemingly no need to vacuum, but the service provider does so anyway because of the requirement that it be done “nightly.” It does so because it must leave a pattern in the carpet that shows vacuuming was done. But in the next room printer toner has gotten into the carpet and requires exceptional effort to

make the service acceptable. In a call center operation to provide assistance to veterans concerning benefits, one veteran may be well prepared with clear questions, while the next is not sure what they need to know and requires much more time and assistance.

The personalities of human service objects can also result in variations in results. Some people are harder to please than others, and what satisfies one might not satisfy another. The same service process might produce very different service quality assessments. Thus, in advisory and assistance services differences in styles of communication between various customer personnel and a service provider may result in very different assessments of the quality of the advice or assistance provided.

Conclusion

Having thus proposed a conceptual definition of services and sketched out a model of services, Part II of this BRIEFING PAPER will address their application to the services acquisition process, including requirements analysis, work statement preparation, contract design, solicitation preparation, source selection, and contract administration.

Guidelines

These *Guidelines* are intended to help readers use the conceptual definition and model when planning a service acquisition. They are not, however, a substitute for professional representation in any specific situation.

1. Remember that the essence of all service is change. A customer buys a service because they want a change of some kind. When analyzing requirements, think of what changes you will want the contractor to make.

2. When analyzing service requirements, think in terms of service objects (things) and object states (attributes and conditions).

3. Determine what things or categories of things

you will want the contractor to work on and what states you will want the contractor to address and change.

4. Describe or forecast the initial state in which you expect the contractor to find the object upon first encounter.

5. Describe the state that you will want the contractor to produce, using technical terms only as necessary.

6. Determine the mode of service that you will seek. Is it a job, a project, or an operation? If it is an operation, is it continuous, continual, or cyclical?

7. Write tasks in the form of an imperative sentence, with the contractor as subject, a transitive verb, and a noun phrase to describe the object and a predicate complement describing the performance objective: *Do this to this in order to produce this effect.*

8. Remember that effort is not product. Value lies in the change the contractor produces in the service object, not in the effort made to produce the change.

9. When the service objects will be persons, remember the special problems that arise with respect to service quality.

10. When establishing quality standards, remember the problem of requirement-process-result heterogeneity. Determine whether a point or range standard is best.

ENDNOTES:

¹FPDS Report: Total Actions by Product and Service Code (Oct. 1, 2022 through Sept. 30, 2023).

²See FAR 2.101, 35.101.

³T.P. Hill, "On Goods and Services," 23 Rev. Income & Wealth 315, 318 (Dec. 1977), available at <http://www.roiw.org/1977/315.pdf>.

⁴64 Fed. Reg. 18984, 18986 (Apr. 16, 1999).

⁵See the definition of "Acceptance" at FAR 46.101 and FAR Subpart 46.5, "Acceptance."

⁶See FAR 16.207; FAR 16.306(d)(2).

⁷The service object's response to the acceptable treatment or the training is another matter entirely.

⁸FAR 37.602(b)(1) & (2).

⁹FAR 37.602(b)(1) & (2).

¹⁰FAR 37.602 ("Performance work statement"); FAR 37.603 ("Performance standards"). See generally Edwards, "Performance Work Statements: The Policymakers' Monster—Where Is Our Theseus?," 35 *Nash & Cibinic Rep. NL* ¶ 11 (Feb. 2021).

¹¹American Heritage Dictionary of the English

Language (5th ed.); Webster's New World College Dictionary (4th ed.).

¹²Nash et al., *The Government Contracts Reference Book* 477 (5th ed. 2021).

¹³Parry, Newnes & Huang, "Goods, Products, and Services," in *Service Design and Delivery* 19, 21 (Springer Science + Business Media 2013), available at https://www.researchgate.net/publication/225830366_Goods_Products_and_Services.

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