European Journal of Marketing

How to Design a Service
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by G. Lynn Shostack

The difference between products and services is more than semantic. Products are tangible objects that exist in both time and space; services consist solely of acts or process(es), and exist in time only. The basic distinction between "things" and "processes" is the starting point for a focused investigation of services. Services are rendered; products are possessed. Services cannot be possessed; they can only be experienced, created or participated in.

Though they are different, services and products are intimately and symbiotically linked. A box of cereal, for example, may appear to be a simple product. But it is the culmination of a very long series of marketed services and products, beginning with the service of farming. Or, services and products can act simultaneously to form a larger entity. A department store is a place in which the service of retailing is rendered. Yet retailing is not a complete entity without inclusion of products. A department store's image and clientele are a function of both retailing and *merchandise, and these cannot be separated without sacrificing the unique definition of a department store.*

Today, while "that which is marketed" may still be a simple product or an unadorned service, it is often a more complex combination of products and services. And the first step towards rational service design is a system for visualising this phenomenon, so that services can be given proper position and weight in the context of any market entity.

The Molecular Modelling Approach

Product/service combinations that form larger market entities can be quite complex. Since they are dynamic and have highly interrelated elements, it is useful to view them in an organic way, rather than as static bits and pieces. In fact, product/service combinations can be viewed very much like "atoms" connected in unique "molecular" configurations.

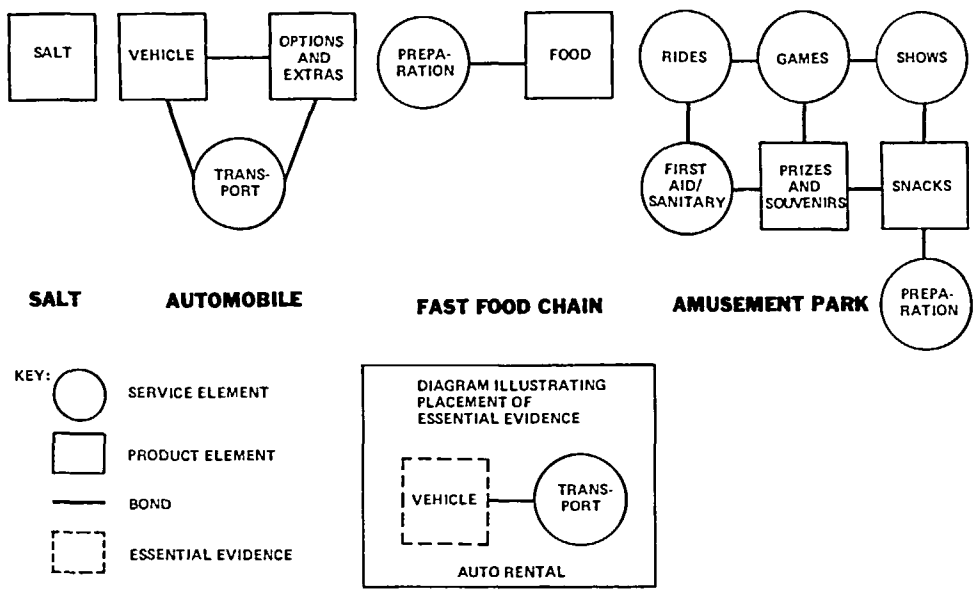
The molecular analogy has considerable merit. First, it allows full consideration of service elements as well as product elements. Second, it offers a framework for identifying and visualising all the parts of any complex market entity. Finally, it suggests the behavioural hypothesis that rearrangement or alteration of any element, whether by design or accident, will change the overall entity, just as changing the

bonds or atoms in a molecule creates a new substance. This latter hypothesis has significant implications for both the planning and management of complex market entities. Thus, scientific analysis can be applied in marketing to build models and to show structure and relationship. The system for doing so is called molecular modeling.

Diagramming Complex Entities

In practice, molecular modelling is a flexible, easily used tool which can help the marketer better understand any market entity. Figure 1 shows a range of entities diagrammed to illustrate the principles of molecular modelling. The system consists of two basic symbols denoting the key product and service elements of the entity; that is, the primary elements which will be purchased and/or used by the consumer. Only the most important elements have been shown in Figure 1. Within each of these, of course, a number of sub-products and sub-services may exist. Market research can be of assistance in identifying and prioritising these elements, especially when an entity includes many products and services. While indirect or subordinate elements may be of some importance in a final marketing strategy, they usually need not be addressed until the more detailed stages of analysis.

Figure 1. Basic Molecular Modelling



In Figure 1, the entities are arranged from product dominance to service dominance. Salt, for example, is an uncomplicated product. While salt is purchased to provide a benefit (i.e., seasoned food), no important services are purchased along with salt, only the very indirect services of mining, purifying, packaging and distributing the salt.

The automobile is, however, a more complex entity. While the main product element and its physical features are obvious and important, the entity includes the service of transportation as well. For some market segments the service of transportation is the *prime* purchase criterion. The automobile may be passed over in favour of an airline ticket or even a motorcycle by such a purchaser. Conversely, for some segments the product is paramount. The service characteristics of transportation are irrelevant. This segment will endure discomfort and inconvenience to drive an *avant-garde* or status vehicle.

In keeping with the hypothesis of molecular modelling, if one changes either the elements or their order, the entity is changed. For example, if transportation is removed from the automobile entity, it is clear that a non-functioning object is being marketed. An antique car, for display only, might be such an object. Conversely, removing the product elements from this model might yield a pure transportation service such as parcel post.

At the far end of service-dominant complexity one might find banking, which is a host of services having little product content, or, as Figure 1 shows, an amusement park. Here, souvenirs and snacks may represent the only product elements in the entity, and these are clearly not the key variables in either the purchase decision or the usage experience.

Relationships and Proportions of Elements

In Figure 1, all elements have been shown at the same size. However, segmentation research can be applied to create prioritised models based on consumer preference. For example, in a complex entity such as an amusement park, first aid and food services will carry greater weight (and be drawn at proportionally larger size) for parents with young children than for teenagers. Similarly, research can be used to prioritise the bonds connecting various elements. These bonds may be used to signify clusters of elements having a high correlation in purchase decisions, or elements influencing usage of other elements or any other relationships deemed important by the marketer.

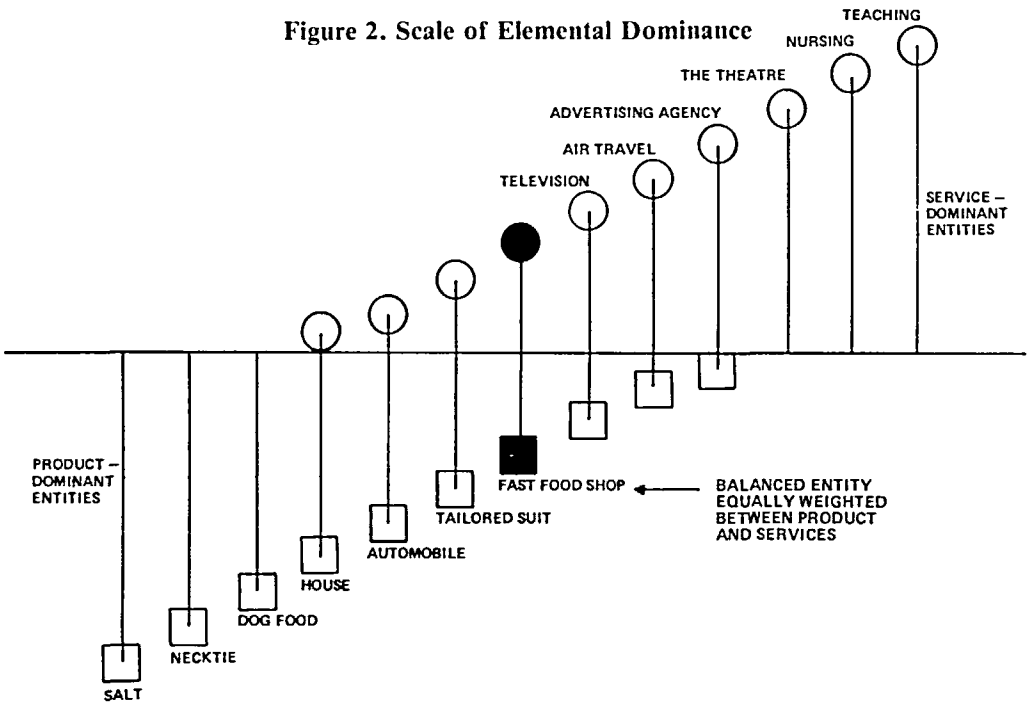
Using molecular modelling, a comparative scale of dominance can be created which arrays entities according to their overall makeup. As illustrated in Figure 2, entities at either end of the scale can, for convenience, be simply called "products" or "services", since their dominance is so pronounced. Hybrid entities, towards the middle of the scale, must be treated especially carefully by the marketer, for here product and service elements are almost balanced, and disrupting this balance can have a major impact on market perception of the overall entity.

The Role of Service Evidence

Services are often accompanied by physical objects which cannot be categorised as true product elements. These objects, or pieces of "evidence", play the critical role of verifying either the existence or the completion of a service. A true product element, of course, never requires evidence. It is its own evidence.

There are two kinds of service evidence. The first is peripheral evidence. Typically, while peripheral evidence is actually possessed as part of purchase, it has little or no independent value. An example of peripheral service evidence is a cheque book,

Figure 2. Scale of Elemental Dominance



which is useless without the funds transfer and storage service that it represents. Another example is the admission ticket to an amusement park or theatre. It serves only to confirm the service; it is not a surrogate for the service, nor is it purchased for its own sake. In a molecular model, peripheral evidence must be listed and fully described for each service element.

Essential evidence is the second type of service evidence. Unlike peripheral evidence, essential evidence *cannot* be possessed by the consumer. Nevertheless, it may be so dominant in its impact on service purchase and use that it must be considered virtually an element in its own right. To a consumer who purchases transportation in the form of an airline ticket (peripheral evidence), the aircraft that "facilitates" the service has a strong impact on service perceptions and even purchase. The marked resistance of Americans to flying in DC-10s after several of these craft crashed, and despite numerous safety tests, illustrates this phenomenon.

Because of its importance, essential evidence may be shown in a molecular model as a quasi-product element, defined by a broken-line border rather than the solid line box that denotes a true product. In Figure 1, for example, the model shown for the automobile can be changed to a model for auto rental service simply by enclosing the vehicle component in a broken-line box.

Managing the Evidence

Whether peripheral or essential, service evidence is at the heart of service image, advertising and promotion. Evidence must be as carefully designed and managed as

a service itself, for it is evidence that provides the clues and the confirmations (or contradictions) that the consumer seeks and needs in order to formulate a specific mental "reality" for the service.

The management of service evidence goes beyond what is commonly thought of as "packaging". It extends to the control and design of *all* tangible evidence that the consumer might associate with the service. Typically, this includes objects that are not part of the product marketer's arsenal.

People, for example, are often essential evidence of a service. The way a service renderer is clothed or speaks can have a material impact on the consumer's perception of a service. Intuitively, many service firms recognise this phenomenon; thus the prevalence of uniforms of various kinds in service-dominant industries such as airlines, fast food chains and hotels. Even in sophisticated service enterprises this rule applies. Somehow, no matter how fine the service might be, one would have doubts entrusting one's health to a physician who wore cowboy boots and neckerchief.

The environment in which a service is rendered is another example of potentially essential evidence. Often it is controllable by the service marketer, and should be deliberately planned and managed. An attorney's office painted pink, for example, would probably not inspire confidence. In fact, the ideal environment for such a service (or any other) can be facilitated through market research, which allows designs and market opinions to be tested for suitability to the service. Of course, evidence management can include many other items, even the stationery used for a service. What is important is that every tangible clue be considered, for all of these have an impact on the service.

What is a Benefit?

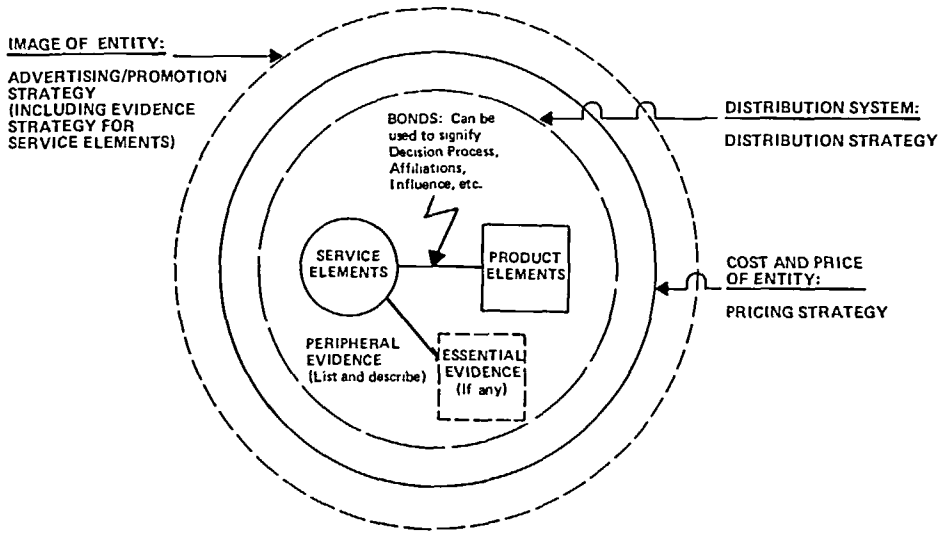
The total real or perceived result of an entity upon the purchaser/consumer is its "benefit". The benefit of dry cleaning services, for example, might be described as "clean clothes", and this, in fact, should be the result of purchase of the service. The benefit of toothpaste might be "clean teeth" or "fresh breath", which may or may not be a verifiable result. The benefits of a complex service such as tax return preparation might span a range and priority, depending on market segment, from "accurate computation" to the less precise but no less real "peace of mind". It is vital that benefits not be confused with services or with image in diagramming, designing or managing an entity.

Completing the Molecular Model

Figure 3 illustrates the structure of a completed molecular model. All product and service elements have been identified. Bonds between elements have been described and drawn. The peripheral and essential evidence associated with each service element has been described. Finally, the remaining elements of the marketing equation have been added. They are shown as encompassing, or ringing, the entity, reflecting both their relationship to the entity and the order in which the marketer should logically deal with them.

First, the marketer must consider the entity's distribution system. Service elements can be difficult to distribute, since service uniformity is difficult to create

Figure 3. Components of a Completed Molecular Model



and maintain. Second, the marketer must consider the entity's cost and set a proper price. Again, service elements present a problem. Services' "raw materials" are often dominated by time, which, unless the service is carefully designed, can be difficult to measure or control. Finally, the marketer must consider the advertising and promotion of the entity. As previously described, service elements require close attention to evidence management, an area in which few advertising firms are fully versed.

Each of these rings in the marketing mix represents a field of discipline and detail in its own right. The problems presented by service elements in each ring will not be gone into in detail here, except to note that it is an area ripe for further inquiry, insight and research.

The Concept of Service Blueprinting

After modelling the product and service elements of a complex entity, the marketer must thoroughly examine the structure of each element.

To "know your product" is a fairly straightforward job. Engineering specifications, photographs, physical examination, even personal trial are all available to the marketer. If necessary, even more detailed data can be gathered, down to the formula for the paint on a bit of trim. Thee is little difficulty in making comparisons among products. Differences in raw materials, costs, finished appearance and functions can be ascertained.

To "know your service" in any comparable sense is almost impossible. There is no "service engineering" text to which the marketer can turn. There are no equivalents to help the marketer overcome the lack of photographic, physical or trial use documentation. There does not appear to be even common acknowledgement of

the need to overcome these obstacles.

As a result, services are very often defined in terms of poorly articulated oral and written abstractions. From this subjective and superficial start, the conclusion is drawn that "the service" is now documented and understood, that what is "known" about the service can be communicated with precision and certainty to all those who will henceforth "market" and manage it, and that the service has been "fixed" in a way that allows rational minds to act rationally upon it.

Perhaps this is the reason so many services go awry, and why marketers so often seem limited to creating advertising programmes rather than actually creating and managing services. If a service cannot be completely and objectively dimensioned at the outset, how can it be adequately compared to other services, or intelligently planned or effectively changed or controlled?

What is required is a system which will allow the structure of a service to be mapped in an objective and explicit manner while also capturing all the essential functions to which marketing applies; in other words, a service blueprint.

The Nature of Services

Clearly a method for "blueprinting" services is needed. This is no simple task, for among the many other intriguing characteristics of services is the fact that services "exist" in two different states of being.

The best analogy for this phenomenon is electricity. Electricity exists in two states: as potential energy and as kinetic energy. A battery represents potential energy. For convenience, we say that electricity is *stored* in a battery, even though a battery is actually a fabrication of materials and chemicals possessing the *means for creating* electricity, not a repository for any physical substance. Kinetic energy is the electric current itself. Kinetic refers to motion, thus kinetic electricity only exists during the time it is being rendered or while it is "on".

A service also exists in two states. In its potential state, a service may be "stored" in ways that are analogous to batteries. For example, the potential service of haircutting is stored in the form of a trained barber. A potential service such as tax computation may be stored in the form of a program inside a computer.

In its potential state, a service can only be described in hypothetical terms, or as what will be called a "blueprint". For example, the potential service of haircutting consists of a series of steps which a barber should perform in a particular order and manner to yield a particular type of haircut. Many unique blueprints can be developed for any generalised service. In fact, many (if not most) underlying blueprints for services are developed through trial and error. One barber school may teach starting at the nape of the neck, while another may begin with the crown of the head, yet both will achieve satisfactory results.

Whatever the blueprint for the *potential* service, the *actual* rendering, or kinetic state, of the service will almost always deviate in some way. A battery is constructed to produce a given voltage. However, the actual current will always vary, within acceptable tolerances, from battery to battery because it is physically impossible to build absolutely identical batteries. To the user, these variances are normally indistinguishable and unimportant, so long as the flashlight lights or the radio plays. Similarly, no two haircuts are exactly alike. They may differ in duration, in quality,

or in customer satisfaction, even when a specific blueprint has been followed. But unless the deviations exceed some level of tolerance, they will be accepted as part of the satisfactory execution of the service. Of course, the more complex the service, the more likely the possibility of significant kinetic deviation. Also, the less specific the blueprint, the more room there is for deviation.

Implications of Potential and Kinetic Service

Clearly, a service marketer cannot truly design a service without having a systematic way to build a service blueprint. Even with an existing service, it would seem foolhardy to think that any marketing plan or action could be taken without first thoroughly blueprinting the service in question. Yet, because marketing provides no blueprinting theory or tools, marketers very often plunge into action on the basis of nothing more than a paragraph on paper describing "the service". Beyond a precise blueprint of the potential service, it seems equally clear that the marketer must be aware of and have a method for both setting and tracking the deviation tolerance of a service; that is, the degree to which the kinetic execution of the service can or will be allowed to vary from the blueprint.

The Roots of Service Blueprinting

Since a service is basically a process, service blueprinting rests, as it must, on systems that have been developed to deal with processes, acts and flows. Three systems are relevant: time/motion or methods engineering; PERT/project programming; and computer systems and software design. While none offers the complete answer, all offer tools and concepts which can be modified for service design.

Time/Motion Engineering

Methods engineering offers an extremely precise and detailed system for process planning. While used mostly in planning the manufacture or assembly of products, it has also been applied effectively to service operations, typically "back-office" operations, such as check processing, and fast food preparation.

At its most detailed level, methods engineering performs micromotion studies of manual processes, analysing films of workers frame by frame in order to reduce or eliminate labour. Obviously a discipline so precise and well-developed can and does have enormous utility in cost control, output and efficiency on the assembly line. It has equal applicability to services.

The basic tools of time/motion engineering are eight basic charts. They are visual and quantitative ways precisely and objectively to describe processes. Each charting method has a specific application. Of these, three are most relevant to service blueprinting.

First, the Operations Process Chart shows a chronological sequence of the operations, inspections, time allowances and materials used in a manufacturing process, and depicts the entrance of all components and sub-assemblies to the main assembly. In this system of description, specific symbology and visual rules apply—for example, a ⅜" circle is used to denote an operation, a ⅜" square is used to show an inspection.

The second kind of chart is called a Flow Process Chart. It is more detailed than

an Operations Process Chart, and is used to show sub-processes. Again, specific symbols are used. For example, a small arrow signifies transportation of an item, a small triangle denotes storage.

A third chart, the Flow Diagram, puts these symbols and descriptions in order and pictorially shows the physical layout and location of all operations. Typically a factory floor plan is used, and the process is traced upon it.

PERT Charting

Allied with time/motion engineering, the PERT Chart is used for project scheduling, as opposed to process description. A PERT Chart shows time dimensions and costs for each part of a project. Its symbology is not visually detailed, but its method of visualising a project yields such concepts as critical pathing—which shows the minimum time needed to complete a project. PERT Charts are typically used in conducting cost/time trade-off analyses.

Systems and Software Design

A computer program is nothing more than a series of instructions for executing binary choices. Within a computer system, various kinds of general programs exist that are conceptually and operationally relevant to services. There are application programs for processing data or transactions; there are supervisory programs to coordinate and schedule the work of application programs; there are support programs to maintain the functionality of other programs.

Multiprogramming, for example, is a name for a group of programs which tell a computer how to handle tasks involving erratic input, random timing and variable content. A task scheduler program decides which, of many tasks, will be done next. Task management is that part of an operating system that supervises units of work—maintains lists of tasks, controls the sequence and handles interruptions. Data management controls input and output. Of course, there are many other facets of systems design, but these serve to illustrate that what happens in a computer is often analogous to what must happen in order for a service to be successfully rendered.

More is Needed

Conceptually, each of these three methodologies bears importantly on service blueprinting; yet each is incomplete in terms of the service marketer's needs. Time/motion engineering, for example, offers a descriptive system for manual human performance, but does not deal with other service functions such as evidence. Software design does not deal with time or cost in human terms, nor provide for alternative process execution. PERT does not offer an analogue for the consumer. None of the systems deals with distribution, pricing or promotion, or the interactiveness between marketer, service and consumer as an adaptive force.

Necessary Elements of Service Blueprinting

The basic requirements of a service blueprint are three. First, since processes take place in time, the blueprint must, like PERT charting, show time dimensions in diagrammatic form.

Second, like methods engineering, the blueprint must identify all main functions

(and sub-functions) of the service. Where these are performed by people, a work chart should be constructed. All input and output of functions must be shown. Like systems design, the blueprint must identify and handle errors, bottlenecks, recycling steps, etc.

Finally (usually after research), the blueprint must precisely define the tolerance of the model, i.e., the degree of variation from the blueprint's standards that can be allowed in execution without affecting the consumer's perception of overall quality and timeliness.

Tolerances in Service Execution

Tolerances may be expressed in terms of time, order or output. Typically, the deviation tolerance is a band, or range, around each function, which can be mathematically set. A model standard can thus be set for the service, and for all functions within it.

Deviation tolerances are used in many services already. McDonald's, for example, which revolutionised fast food services, established a timer that signalled the moment the uniform-sized meat patty was to be turned on the griddle. A deviation tolerance of a few seconds obviously wouldn't make any perceivable difference to the consumer. Yet without this control, not only might the uniformity of the product element suffer (underdone or overdone), but consumer perceptions of "fast" would be vulnerable to much greater swings and, not the least important, costs and profits would be directly affected.

Fast food service is, when analysed, complex enough. Services such as legal clinics or accounting firms present much more difficult problems, partly because the service includes diagnosis and judgement, not just rote process. And yet these services are still created *ad hoc,* without anything analogous to the engineering that goes into equivalent products. A consulting service can be every bit as complex as a jet airplane; yet the difference in engineering effort that goes into designing these two entities represents total extremes.

If, however, all these criteria can be satisfied, the marketer (or service engineer) will at last be in a position to affect materially, plan knowledgeably and control strongly the service itself.

An Approach to Blueprinting

A refined quantitative technique for service engineering does not exist. The marketer may find that a subfunction such as "room cleaning" within the complex entity "hotel services" has been rather thoroughly worked out. But other functions (e.g., recreational services) will not have been so carefully mapped, nor will all functions have been linked together into a blueprint of the whole that satisfies criteria of deviation tolerance, consumer/back-office distinctions, competitive comparisons or consumer total image.

It is not possible to discuss in full all the details and nuances of a complete service blueprint. Only the most basic principles can be suggested here, with the intention of encouraging thoughtful inquiry and further research. Accordingly, Figure 4 illustrates a simple market entity, modelled according to principles described earlier, and Figure 5 displays a blueprint for the main service element of that entity.

Figure 4. Model of a Simple Entity

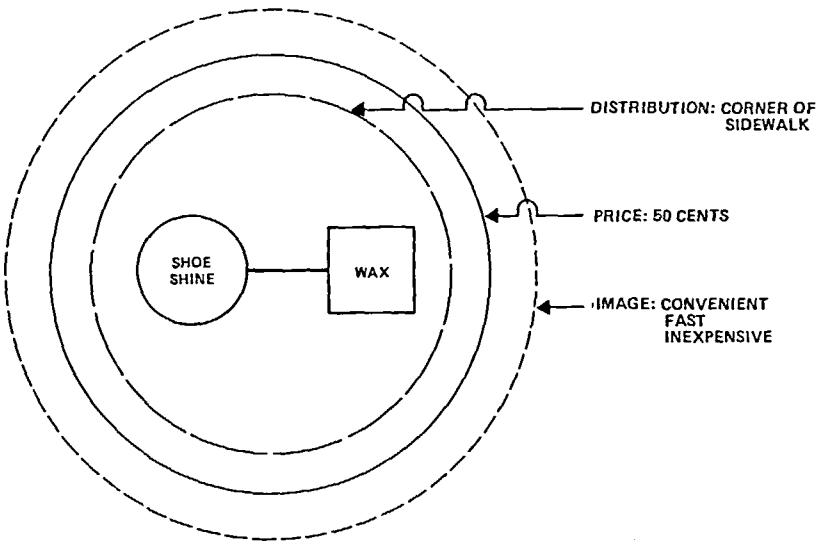
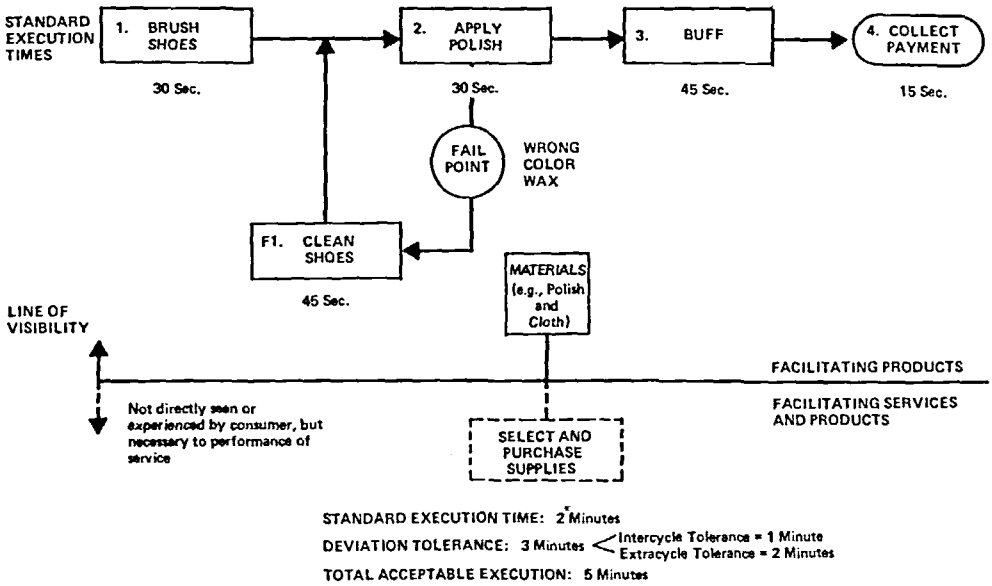


Figure 5. Blueprint for a Simple Service Corner Shoeshine



Identifying Service Functions

In this example, four process steps have been identified proceeding left to right in time as constituting the primary blueprint for the service. The rectangular symbol signifying process is borrowed from computer systems design. The blueprint identifies one main error possibility, that is, application of the wrong colour of wax. An auxiliary, or recycling, process (i.e., clean shoes) is shown as being necessary in order to complete the service. (If the consumer himself renders part of the service, for example, with a do-it-yourself buffing machine, step 3 would be shown as a rectangle with a corner notched.)

The product element is an indirect facilitating good whose quality may be judged by the consumer as part of judging the entire service. This element is shown as being "visible" to the consumer, but not part of the service process. Certain processes and evidence which are not visible to the consumer may also be shown. Purchase of supplies, for example, is shown below the "line of visibility" of the service as a subservice, necessary, but not seen by the consumer. For some services these backoffice processes are important, since a change in them may change the service or entity. Thus, these may also require monitoring and consideration by the marketer. If, for example, a computer program is redesigned in such a way that a different account statement is produced for banking customers, this new piece of evidence may affect service image and may affect other perceptions of price/value as well.

In the example shown, there is no peripheral or essential service evidence. Even the single product element (a coat of wax) is virtually invisible.

Identifying Benefits

There are at least several consumer benefits derived from purchase of a shine. That of having shiny shoes is obvious. Self-confidence may also accrue, from the psychological uplift of a shine. Protection from dirt and wear may also be a benefit. Of these, two may be objectively verifiable. The benefits of the service may be listed below the blueprint, and should be researched both before and after a blueprint is changed.

Identifying Standards and Tolerances

The Figure 5 blueprint has a model execution time of two minutes. The deviation tolerance for this blueprint is shown at 180 seconds, or three additional minutes. Beyond five minutes, the consumer will show signs of dissatisfaction and begin to lower materially his judgement of quality.

As shown, the total tolerance is divided into two categories. Inter-cycle deviation occurs within the service process itself. For example, if buffing extends to 60 seconds, 15 seconds of inter-cycle deviation will have taken place. Extra-cycle tolerance occurs outside the service process. Waiting two minutes in line for the service would be an example of extra-cycle deviation.

While both types of deviation affect consumer perception, usually only inter-cycle deviation affects profitability. Therefore, the marketer, in designing a service, should set service tolerances to relate directly to profit. The profit analysis for the Figure 5 blueprint is shown in Table I.

Table I.

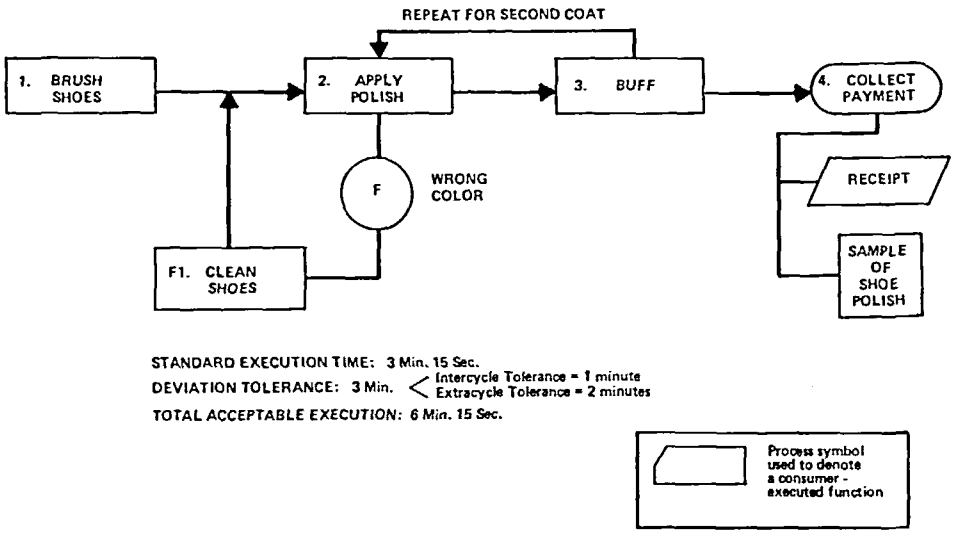
	Total Inter-Cycle Execution		
	2 Minutes	3 Minutes	4 Minutes
Price	50c	50c	50c
Costs			
1) Time @ 9 cents per minute	18c	27c	36c
2) Wax	5c	5-7c	5-7c
3) Other (brush, cloth, etc.— amortised	7c	7-8c	7-8c
Total Costs	30c	39-42c	48-51c
Pre-tax Profit	20c	8-11c	2-(1)c

Within the service cycle, an application of the wrong wax or spending too much time on any function can reduce pre-tax profit by half or more. At the four minute stage, the service loses money. This is true even though the customer will tolerate up to five minutes of total execution time. Thus the temptation to relax productivity to the customer's level of tolerance has been deliberately offset by the profit dynamics of doing so. When the marketer sets service standards and tolerances in this way, not only does he also establish a basis for measuring performance, but also a basis for managing uniformity and quality and for rational distribution of the process.

Modifying a Service

While Figure 5 may appear to be a very simple service, it is subject to substantial change by the marketer.

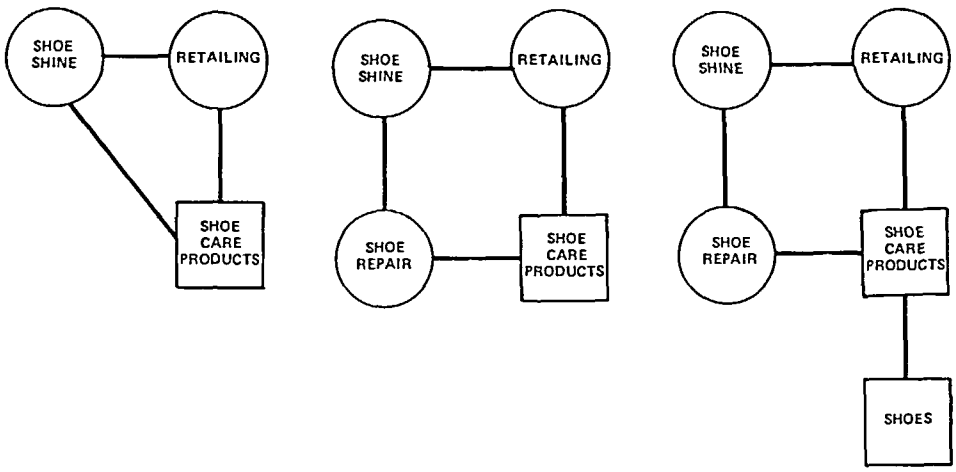
Figure 6. Modified Design Incorporating New Service Cycle, Service Evidence and Product Element



As Figure 6 shows, the marketer may add a repeat cycle of steps 2 and 3, thus creating a two-coat shine. This may be sufficient differentiation to allow a 20 cent price increase, thus increasing the margin by one cent. Or, a marketer might decide to add service evidence in the form of a receipt, or add product in the form of a sample of wax. Not only would the marketer create a "reminder" of the service (by perhaps printing his name and address on the sample), but he might be able to raise prices even higher. Or he might be able to maintain his price, yet increase his margin, by buying a machine that lets the customer buff his own shoes. The time saved would allow greater profit, provided no perceived diminishment in quality occurred on the customer's part.

In addition to the controlled change suggested by Figure 6, both the service blueprint and the molecular model can be used even more flexibly to "engineer" market entities. Figure 7 shows how whole new market entities can be designed starting with a basic service element and adding other service and product elements to it. Clearly, a great deal of entity design can be done at the drawing board, well before expensive formal market introduction. Moreover, it can be done objectively, quantifiably and scientifically.

Figure 7. Alternative Designs for More Complex Entities



Benefits and Uses of Service Blueprinting

These principles can be applied to much more complex services than corner shoe shines. It is manifest that if changes in a service occur at random or without marketing as the controlling force, marketing cannot pretend to be exerting more than token influence on any service. Moreover, if no blueprint exists and customer behaviour towards the service changes, the marketer will neither be able to account for the change nor scientifically modify the service towards maximum efficiency.

Both molecular modelling and service blueprinting can materially improve the marketer's ability to design, manage and modify services, and are an important step

towards rationalising the marketer's job and true scope of responsibility.

In Design of Elements and Entities

At the design and planning stage, both molecular models and service blueprints help to encourage creativity, pre-emptive problem solving and well-controlled implementation.

The service blueprint accomplishes a number of objectives. First, it provides both a visual and a quantitative description of any service element that is more precise than verbal definitions and less subject to interpretation or misinterpretation.

A service blueprint allows a service to be created on paper. Rather than resorting to subjective and imprecise concept testing as a means of service development, an actual blueprint can be tested, in which the proposed service has been thoroughly and specifically worked out. A blueprint can even be mocked up into a prototype service which can be trial-tested by potential consumers in ways that give the marketer concrete and actionable feedback. This feedback can be used to make rational modifications before the service is re-tested. All this is possible because the blueprint allows the marketer to know *exactly* what he is testing, be it deviation tolerances, fail points, consumer values associated with specific functions, evidence or any other feature.

In Managing Existing Services

The service blueprint provides a permanent benchmark against which execution can be measured, modification proposals analysed, competitors compared, prices established and cogent promotional plans developed.

When blueprints and deviation tolerances are established, service distribution becomes more controllable. A blueprint allows a service to actually be "architected" at some remote location, yet conform exactly to model standards. A refined blueprint, the result of careful and continuous research and modification, can be literally distributed and implemented at any number of sites. Regular reporting systems can easily monitor performance of the service across its distribution system. This would be a significant step forward from today's unavoidable practice of shipping off trained *people* who supposedly understand a service to new sites and trusting that the same *service* will be created there.

With a blueprint, price changes, function changes, consumer input can all be evaluated for impact on the total entity. Diagnostics can be done on trouble spots, and market research on services can be made far more well-focused by being directly anchored to a specific visual and mathematical model.

Service evidence can be both created and managed in an integrated fashion; advertising and promotion can be intelligently linked to a total evidence programme.

Conclusion

Finally, both modelling and blueprinting offer a system for the marketer that can lead to the kind of experimentation and management so necessary to service innovation and development. They give the marketer powerful professional tools and a discipline that allows the marketer a broader role and impact than has existed to this point. For marketers, and for service firms and industries, this is a necessary and surely welcome step forward.

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