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# Service management in housing refurbishment: a theoretical approach

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It is unusual to find that housing refurbishment projects have been undertaken with a clear focus on customer orientation directed towards the tenants, or owners of cooperative flats or condominiums. Only recently have researchers in construction management begun to look closer at the relationship between contractors and customers. To assess the scope for customer orientation in the refurbishment industry, current thinking in service management is reviewed here in an attempt to identify principles with implications for housing refurbishment. There is a consensus among service management investigators that services are intangible; other often mentioned characteristics are heterogeneity, perishability, and the inseparability of production and consumption. Except for inseparability these characteristics are valid for refurbishment. Nevertheless, features such as the long turn-round time, the number of participants, the complexity and the uncertainty, distinguish housing refurbishment from most services. There is strong empirical support for the claim that customer satisfaction increases customer loyalty and gives the service producer a positive reputation, ultimately increasing profitability. It is concluded that this insight can be interpreted operationally for housing refurbishment projects, bearing in mind that the tenant or the owner of a cooperative flat is the customer's customer.

*Keywords:* Housing refurbishment, customer satisfaction, service quality

## Introduction

It is generally acknowledged that customer satisfaction is essential for sustainable success in business relations. In spite of this observation, many housing refurbishment projects have been undertaken with deficiencies in ultimate customer orientation. Landlords and construction companies occasionally conduct questionnaire surveys regarding dweller satisfaction. Nevertheless, survey information is seldom used for major improvements of the refurbishment process.

In traditional construction management studies of housing refurbishment little attention has been focused on the customer relationship. Only recently have principles of service management been applied

to housing refurbishment projects in construction research (Ahonen, 1993; Holm and Bröchner, 1999).

As a sharp contrast to this scarcity of investigations concerning customer orientation in the field of refurbishment, a rapidly growing number of studies of customer satisfaction and service quality in the service industries have been published over the last few years, showing the correlation between customer satisfaction, or service quality, and economic returns.

Even though a refurbishment process – whether it concerns dwellings, industries or offices – and service production in general appear to have many common characteristics, there are some dissimilarities. The most obvious difference is the time that elapses between consecutive customer interactions, which could be thirty years for building refurbishment and four weeks for a haircut. As the time elapsed is longer in the

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refurbishment process, brand loyalty is often much weaker. If we look at single-building owners, considerable time will have passed between the occasions for large scale building refurbishment, but a bank customer may use the bank every week. Another striking difference is the large number of different craftsmen and enterprises typically involved in a refurbishment process, while for example a restaurant customer often does not have contact with more than a couple of people and with only one service provider.

To establish the positive impact of customer orientation on the refurbishment industry, current thinking in service management is reviewed here in an attempt to identify principles with strong potential for application to housing refurbishment. Thus this investigation offers theoretical and practical implications for the housing refurbishment industry, based on service theories compiled from a review of the service management literature. First it is established that refurbishment should be seen as a part of the service industry, then the importance and implications of customer satisfaction in services are presented. Subsequently special characteristics of construction and refurbishment are identified, and finally the implications for the refurbishment industry are discussed and conclusions are offered.

## Conceptual framework

### Refurbishment – a part of the service industry?

A thorough and still useful survey of the literature on service marketing, based on 46 references, was made by Zeithaml *et al.* (1985), identifying the unique characteristics of services. The basic difference which separates services from tangible goods, according to all their references, was intangibility. Other characteristics, not agreed upon by all authors, were inseparability of production and consumption; heterogeneity (non-standardization); and perishability (cannot be inventoried).

When comparing these characteristics with the case of refurbishment, it is easy to observe that refurbishment is, on most accounts, a service:

- 1 Refurbishment is intangible, although the product is tangible.
- 2 Refurbishment can be separated from consumption, but the tenant or owner of a cooperative flat has the right to use the service of living in the flat. Thus, refurbishment raises the value of a flat and thereby raises the value of the service provided – the flat enters into a new service period. This can be compared with services on other durable goods such as cars or washing machines. The value of the goods increases.

- 3 Refurbishment is a heterogeneous product, it has a high variability in performance and it varies from company to company and from time to time.
- 4 Refurbishment, seen as a set of activities, cannot be stored, and the capacity of a craftsman not used one day cannot be used the next.

More recently, Lovelock (1994, p. 11) has categorized the service process in four types: services directed at people's minds; services directed at intangible assets; services directed at people's bodies; and services directed at physical possessions. The first two are intangible actions and the last two tangible actions. If we use the types defined by Lovelock, refurbishment would fall into services directed at physical possessions, where he in fact mentions repair and maintenance as belonging to the group.

Even so, there are no clear-cut definitions of a service industry, and the distinctions between manufacturers and service providers are vague. Almost all parts of the manufacturing industry contain some services. To quote Levitt (1972, pp. 41–42) 'There are no such things as service industries. There are only industries whose service components are greater or less than those of other industries. Everybody is in service', and Grönroos states (1990, p. 4, his italics) '*Manufacturers will have to realize that they, too, are part of the service economy*, and thus will have to learn the new rules of service'. Normann (1991, p. 7) concludes that many of the organizations that think they are manufacturing companies have to accept the consequences of seeing themselves more as service organizations. Services and physical products exist in combination in all businesses.

For many years research within construction management has looked at the manufacturing industry for new paradigms (Bröchner, 1997). However, when dealing with alterations to existing buildings, there are good reasons for recognizing and highlighting the service element.

As refurbishment should be seen as a service, or at least displays three of the four most commonly used characteristics of services, there should be much to learn from service theories.

### Service theories

Theories of service management are, with few exceptions, dominated by the issues of customer satisfaction and service quality.

#### *The need for customer satisfaction*

If we consider the whole body of research in the field of service management, it is a fundamental and recurring observation that high customer satisfaction leads

to superior economic returns. This can be explained by key concepts such as customer loyalty and a positive reputation for the firm.

The link between customer satisfaction or a positive perception of service quality and increased loyalty, in service industries, has strong empirical support. Strong correlation between overall patient satisfaction and behavioural intentions to return to the same service provider (hospital) was shown by Woodside *et al.* (1989). Reidenbach and Sandifer-Smallwood (1990) demonstrated the positive relationship between a patient's perception of service and patient satisfaction in a hospital. Cronin and Taylor (1992) indicated the influence of service quality and consumer satisfaction on purchasing intentions in banking, pest control, dry cleaning and fast food. Fornell (1992), using the Customer Satisfaction Barometer in Sweden, showed that the importance of customer satisfaction differs from industry to industry. Rust and Zahorik (1993), with a mathematical framework and a pilot study, indicated that customer satisfaction may be linked to individual loyalty. Jones and Sasser (1995) showed customer satisfaction-loyalty relationships in five markets: automobiles, personal computers procured by businesses, hospitals, airlines and local telephone services. Parasuraman *et al.* (1994b) showed the relationship between service quality and behavioural intentions, such as loyalty, in an empirical study of customers of a computer manufacturer, retail chain, automobile insurer and life insurer. A positive correlation between product satisfaction and customer loyalty is shown in empirical investigations regarding household appliances (Newman and Werbel, 1973) and relating to grocery products (LaBarbera and Mazursky, 1983).

There is strong empirical support for the hypothesis that a satisfied customer, or a customer with a positive perception of service quality, gives the firm a positive reputation. The relationship between service, satisfaction and willingness to recommend was described by Reidenbach and Sandifer-Smallwood (1990) in their hospital study. Parasuraman *et al.* (1991) showed the relationship between recommendation and perceived service quality in an empirical study of telephone repairs, retail banking and insurance. Boulding *et al.* (1993) indicated that the perceptions of service quality and the customer's beneficial behavioural intentions, e.g. recommending the company, were linked in a laboratory study and a study of an educational institution. Hartline and Jones (1996) in a hotel study demonstrated the relationship between service quality, perceived service value and word-of-mouth recommendation. They also concluded that not all employees are equally important in delivering quality and value.

The impact of positive word-of-mouth referrals in generating new customers differs from industry to industry, but as Jones and Sasser (1995, p. 94) state, 'In most product and service categories, word of mouth is one of the most important factors in acquiring new customers'. This is in keeping with what Reingen and Kernan (1986) found in their research relating to word-of-mouth referrals and a piano tuning business and the network analysis concerning word-of-mouth referrals and piano teachers performed by Brown and Reingen (1987). Although the construction sector is seldom investigated, Leather and Rolfe (1997) found that many of the small firms in the UK repair and maintenance industry felt that recommendations and word-of-mouth referrals were the most important ways of generating work. According to Reichheld and Sasser (1990) one of the leading home builders in the USA has found that more than 60% of sales are the result of referrals. Early research concerning new food products (Arndt, 1967) and an automotive diagnostic centre (Engel *et al.*, 1969) had shown that an improved reputation can help when introducing new products and services.

#### *How to achieve customer satisfaction*

There is a group of investigations based on the idea that consumer satisfaction is a function of expectations and disconfirmation, as Oliver's (1980) field study of flu inoculation. In the so-called confirmation/disconfirmation paradigm, the outcome of customer feelings of satisfaction and dissatisfaction depends upon an evaluation of the actual performance and certain standards. Thus satisfaction occurs when the performance is better than the standard. This was supported also by Cadotte *et al.* (1987) in a study of restaurant customers. It should be acknowledged here that according to Churchill's and Surprenant's (1982) investigation of hypothetical purchases of durable goods (video disc players), satisfaction corresponds solely with performance, and according to Tse and Wilton's (1988) laboratory research with record players, perceived performance exerts more influence than expectations do on consumer satisfaction. Spreng *et al.* (1996), in a more recent study of the disconfirmation paradigm, claim that desires congruency and information satisfaction are further determinants of consumer satisfaction.

There is no general consensus on the relationship between service quality and customer satisfaction, but Parasuraman *et al.* (1994a) have proposed a model where the customers' overall satisfaction by a transaction is thought to be a function of service quality, product quality and price. That service quality leads to customer satisfaction is an opinion held by other researchers also (e.g. Woodside *et al.*, 1989;

Reidenbach and Sandifer-Smallwood, 1990; Anderson *et al.*, 1994). Furthermore, Cronin and Taylor (1992) state that an antecedent of consumer satisfaction is service quality.

One of the most frequently used models to determine service quality was developed by Parasuraman *et al.* after an exploratory study (1985) and an empirical investigation (1988) into appliance repair and maintenance, securities brokerage, retail banking, long distance telephone calls, and credit cards. They developed the SERVQUAL measure, whereby service quality is evaluated by the customer by means of five dimensions, where '... service quality, as perceived by the customers, can be defined as *the extent of discrepancy between customers' expectations or desires and their perceptions*' (Zeithaml *et al.* 1990, p. 19). The five dimensions to evaluate service quality are tangibles, reliability, responsiveness, assurance, and empathy. Reliability is, for all the services they studied, the most important dimension, and defined as 'ability to perform the promised service dependably and accurately' (Zeithaml *et al.*, 1990, p. 26). Parasuraman *et al.* (1991) have later presented a refinement of their SERVQUAL scale. It should be admitted here that some concern has been voiced about the validity of measuring service quality as the difference between customers' expectations and perceptions (Cronin and Taylor, 1992; Boulding *et al.*, 1993; Brown *et al.*, 1993; Teas, 1993). Zeithaml *et al.* (1996) stated in the debate that there is some agreement that the choice of which measure to use may be affected by the purpose of the study.

Customer satisfaction is linked closely also to employee satisfaction. Heskett *et al.* (1997, p. 100) have presented a strong relationship between customer and employee satisfaction regarding six organizations in various lines of business (telephone communication, food service, banking, travel service, cleaning services and office machines). In empirical studies of banks (Schneider, 1980; Schneider *et al.*, 1980, 1998; Schneider and Bowen, 1985, 1993) and financial organizations (Schneider *et al.*, 1992) have shown a strong relationship between customer satisfaction and the human resources environment within which the employees work. In a study of home healthcare agencies, Hoffman and Ingram (1992) have presented a correlation between job satisfaction and customer-orientation.

Pointing to the intangibility of services, Hartline and Jones (1996) assert that consumers are likely to use brand, price, advertising plus word-of-mouth referrals and tangible service elements as important extrinsic cues to judge the quality of a service prior to purchase. In a service quality model developed by Parasuraman *et al.* (1985) external communications, word-of-mouth

referrals, personal needs and past experience influence expected service. Zeithaml (1988) concludes, after a review of previous research and an exploratory study of beverages, that price is but one of several extrinsic cues of potential use as a quality indicator. How to obtain information about the quality of goods is described by Nelson (1970), where he makes a distinction between search goods and experience goods.

#### *Empirical investigations into refurbishment*

As we have seen, most empirical research has been undertaken in services lacking some of the distinct features of housing refurbishment, such as complexity and uncertainty. Is it still possible to transfer insights from these investigations to housing refurbishment?

As noted initially, it is only recently that housing refurbishment studies have been started with a clear view of customer satisfaction or service quality in the construction management field. Most of the empirical investigations made so far have chosen to concentrate on construction companies in the UK or in the USA while focusing on aspects other than customer satisfaction or service quality. We have Koehn and Tower (1982) comparing of refurbishment work and new construction based on information from contractors and designers from various geographical regions in the USA; Egbu (1995) with answers to questionnaires and semi-structured interviews from refurbishment organizations spread throughout England regarding management tasks in refurbishment; Egbu *et al.* (1996, 1998) with questionnaires, archive documents and semi-structured interviews with key refurbishment personnel from four projects involving refurbishment management practices in the construction and shipping industries; Okoroh and Torrance (1996) with a questionnaire and interviews with refurbishment contractors in London and the South East of England regarding risk management of sub-contractors; and Leather and Rolfe (1997) with telephone and face-to-face interviews with repair and maintenance contractors in the Bristol area, asking for their views on the problems of the repair and maintenance industry as small builders. Thus it is rare that empirical investigations have focused on customer satisfaction or service quality.

### **Characteristics of the construction and refurbishment industries**

#### *Construction characteristics*

The building process, whether it concerns a refurbishment project or not, has many specific characteristics that are seldom found in other types of industry. There are six differences that separate the building industry from most other types of industry.

- 1 Each project is unique and the production is situated in a new place every time.
- 2 The uncertainty within a project, which is caused by environment, technology, etc.
- 3 Long turn-round time.
- 4 The large number of participants: craftsmen from different contractors and subcontractors, architects and consultants, the building proprietor, etc. In many countries there has been a major increase in subletting, thus increasing the number of participants even further.
- 5 The projects are complex and diversified; each building contains a multitude of components.
- 6 The construction process exerts an influence on the environment in the form primarily of noise, pollution and appearance.

#### *Characteristics of the housing sector*

Construction of dwellings and refurbishment of dwellings have two characteristics in addition to those above of construction in general.

- (i) The construction and refurbishment of residences has a major impact on the day-to-day life of the tenant or owner: financial (a residence is one of the most durable and costly goods an ordinary household may consider buying or renting), aesthetic (confronts the tenants or owners daily), and practical (is used by the tenants or owners daily).
- (ii) There are few markets that are so affected by complexities of legislation.

#### *Special characteristics of housing refurbishment*

When undertaking housing refurbishment some characteristics form special cases.

The first characteristic is slightly altered as refurbishment is undertaken in an existing building, whereas a new building project starts with a clear site. This results in a different sequence of work (see e.g. Bennett, 1983; Daoud, 1997).

The second characteristic concerning the uncertainty is intensified; even if you are in possession of the blueprints from the original construction contract the refurbishment contractor does not know if what is on the drawings is what will be found in practice (Clancy, 1995; Daoud, 1997). The uncertainty can be compared with the similar situation with regard to soil conditions in construction or when a consumer is buying a car, in other words a special case of the 'lemon' problem (Akerlof, 1986, pp. 27–39). Due to uncertainty, delays and escalating costs are common in refurbishment projects, as plans have to be changed and new material has to be ordered. Personnel

in construction companies consider refurbishment projects more difficult to manage (Koehn and Tower, 1982). Egbu (1995) states that the most difficult management tasks in refurbishment, according to a survey of refurbishment organizations and managers, are forecasting and planning, analysis of risk and uncertainty, and competitive tendering. In a investigation made by Quah (1992) a higher variability was found in tender bids for refurbishment than in those for new construction.

The third characteristic, regarding the long turn-round time, is especially relevant to refurbishment. Furthermore, in comparison with most services, the time which elapses between two consecutive large scale refurbishment projects in the same building is considerable, for instance 22 years on average in Oulu, Finland (reported by Aikivuori, 1996).

The fourth characteristic is intensified as many workers operate simultaneously in a restricted space. As Glardon *et al.* (1995) state, a fundamental point in refurbishment is management of space, as residents in occupancy and different contractors share the same rights of way. The average number of participants in construction projects is high but probably even higher in refurbishment, as tenants, owner and board of cooperative flats, and subcontractors specializing in for instance concrete drilling, chimney repairs etc. are involved in the process. Accordingly, as Okoroh and Torrance (1996) state in their study of refurbishment projects in the UK, the most important cause for the noticeable increase in subcontracting may be the refurbishment works unpredictable nature. The number of customers increases as there are more tenants, or owners of cooperative flats, than house owners.

The fifth characteristic may be emphasized if it is impossible to use modern tools, for example due to space restrictions or a vibration sensitive building, or the use of 'old' methods and materials being demanded by antiquarians.

The sixth characteristic is further intensified as most refurbishment projects involve work which produces noise (e.g. from concrete drilling), waste material (e.g. from demolition work) and changes in the appearance of the building both external and internal.

Characteristic (i) is complicated as only a very small proportion of the tenants or owners of cooperative flats have adequate knowledge of the building process, and thus the understanding and evaluation of the process by the customer are rendered more difficult. By contrast, there is a higher probability that the owners of industries, office buildings and landlords are more acquainted with the building process.

Characteristic (ii) differs from country to country as housing and social policy within countries dictates the prerequisites for building and refurbishing flats.

A major policy area is thus rent control (e.g. Arnott, 1988; Fallis, 1988; Ault and Saba, 1990; Andersen, 1998).

#### *Why satisfy the customer's customer?*

In refurbishment projects the ultimate customers of the contractor are the tenants or owners of cooperative flats or condominiums, but the primary customers, in the contractual sense, are the owners of buildings, possibly boards representing the owners of the flats. This customer's customer situation is not unique to the refurbishment industry; it is a common phenomenon. It could be compared with one person in a household shopping for provisions or clothing for the whole family, or a hospital purchasing medical equipment for the purpose of running tests on patients (cf. Anderson, 1992). To quote Goldman *et al.* (1995, pp. 267–268), 'Fewer than 10 percent of industrial companies and service companies have end-user consumers as their customers'. The authors add that a way to help the customer of a company is to help their customers.

In refurbishment and repair and maintenance it is possible to distinguish between three types of customer interaction, where the service quality has a positive impact not only (1) on the tenant, or (2) on the owner of a cooperative or condominium flat, but also (3) on the customer/owner commissioning the contractor.

First, one of the services provided by an owner of a building to a tenant is the continuous repair and maintenance work in the flat and in common areas. Thus, if the contractor for this type of work provides a good quality service, the tenant will be satisfied, at least on this account, with the owner. This could in turn lead to a positive impact on what the owner thinks of the contractor.

Second, some of the households in a housing cooperative or a condominium are members of the board or unit owners' association. The percentage is highly dependent upon the number of units, but in a Swedish housing cooperative with let us say 50 flats, a typical representation of households is 10%. As a result, the customer commissioning the contractor is also an end customer and, as a member of the same cooperative, he or she will be an easy target for dissatisfied owners of flats. On the other hand, a well performed refurbishment contract may well improve the prospect of future contracts for repair and maintenance work.

Third, although the time that may elapse between major refurbishment projects is substantial, we should consider refurbishment work as part of the service supplied by the owners to the tenants. During a refurbishment project the service provided by the contractor

will have a major impact on the customers day-to-day life, and thereby on their satisfaction. Therefore, the tenants' satisfaction with the contractors will influence their satisfaction with the owner and thereby the owner's satisfaction with the contractor.

## **Implications**

As housing refurbishment can be regarded as a service, or at least has three of the four most commonly used characteristics of service, it is probable, but not self-evident, that theories from service management may be used to improve the refurbishment industry. However, difficulties can be encountered when theories from other types of industry are being applied to the construction industry, which was shown by Hadavi and Krizek (1994) in their investigation relating to target setting.

Of the eight characteristics of the construction and housing industry mentioned previously, at least five may have an impact on the application of service theories in housing refurbishment.

The uniqueness and the uncertainty of housing refurbishment render it more difficult to standardize the delivered service as many fast-food chains have done. Therefore the outcome of non-standardized customer interaction in refurbishment will be more dependent on the service provider's personnel.

In the case of housing refurbishment, the link between customer loyalty and economic returns should be somewhat weaker, since the time which elapses between large scale refurbishment projects is considerable. Thus a tenant or an owner of a cooperative flat is involved in a limited number of refurbishment projects during their lifetime. Nevertheless, the positive impact of customer loyalty should not be ignored in the refurbishment industry without results from empirical investigations.

With housing refurbishment, a frequent situation which complicates matters of customer loyalty and the generation of positive word-of-mouth referrals is that the customer of the construction firm, which often is a landlord, a board of cooperative flats or a unit owner's association for condominiums, has further customers (e.g. tenants, owners of cooperative flats or condominiums). A further complication is that the building contractor has subcontractors who provide parts of the service to the customer. Thus the implementation of a focus on customer service among the actual service personnel has to pass through a boundary between firms.

The complexity of refurbishment should, because of the number of possible solutions, influence the possibility of standardizing services.

The environmental characteristic should not influence the interaction with the customer, at least if the customer is well informed of disturbing work that has to be undertaken in a certain way or at a certain time.

The seventh characteristic should not alter the application of service theories in any major way. It may even strengthen the importance of customer satisfaction as the result of the refurbishment confronts the customer every day, and thereby reminds the customer of the refurbishment process.

The impact of different legislation, rent controls and subsidies on the application of service theories varies depending on their form.

A great challenge for the construction industry is how to apply service theories to the refurbishment process. The significance of ultimate customer satisfaction is shown in a study by Holm and Bröchner (1999), where it was confirmed that dweller satisfaction improved the reputation of the contractor and subcontractors involved in two refurbished housing co-operatives. Another sign of the importance is to be found in an investigation by Ahonen (1993, pp. 72–73). He reports that a majority of 175 interviewed dwellers in three Finnish towns felt that a somewhat more expensive refurbishment contract with augmented service is preferred to a contract offered by the lowest bidder without such service. However, because of the refurbishment characteristics and the customers' situation more research is needed to strengthen the validity in applying service management theories in housing refurbishment. Moreover, although Egbu (1999) showed that the skills and knowledge connected with tenant welfare is considered to be of great importance by a majority of surveyed refurbishment managers, the impact of ultimate customer satisfaction is not yet fully understood. There is also a possibility that cultural differences between or within countries may change the way in which service theories are applied.

More research is also needed on the formation of the dwellers' expectations as Holm and Bröchner (1999) showed that meeting dweller expectations had a strong impact on the reputation of the contractors. There were strong correlations between meeting dweller expectations and, on the other hand, if the dwellers would recommend the contractor, and if they felt well informed, and if they thought that the performed quality of work was high and if they thought that the refurbishment contractors were trustworthy. These results appear to confirm what Parasuraman *et al.* (1985) have found: external communications, word-of-mouth, personal needs and past experience influence the service expected. Results also agree with what Andersson *et al.* (1994) have identified: consumers use past experience and nonexperiential information in forming expectations.

## Conclusions

In spite of the fact that the significance of customer orientation and service quality has been highlighted in services theories for more than a decade, housing refurbishment has not fully made use of this knowledge. This review of service management literature shows that the refurbishment industry should have a great potential for learning from other services: first, since there is a close link between customer satisfaction or a positive perception of service quality and increased customer loyalty; second, since a satisfied customer or a customer with a positive perception gives the firm a positive reputation; and third, since there is a close link between customer and employee satisfaction. Nevertheless, the full impact of customer satisfaction in housing refurbishment cannot be understood fully without further and specialized empirical study.

In this investigation it has been established that housing refurbishment is part of the service industry, or at least displays three of the four most commonly applied characteristics of services, although refurbishment has many specific features that are seldom found in other types of service. Some of these characteristics, such as long turn-round time, uncertainty, complexity and the large number of participants, should be highlighted in future empirical studies. Furthermore, the significance of informational exchanges between customers and contractors should be analysed. These should concentrate on the relationship between tenants or owners of cooperative flats and contractors, and should aim at an improved understanding of the significance of customer satisfaction in housing refurbishment.

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