

BUILDING CARE THROUGH CUSTOMER CARE

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Abstract

Building maintenance has long been portrayed as a 'Cinderella' activity (Seeley, 1976), unattractive and often poorly considered; and yet it is a very substantial part of the construction economy- in the UK £28 Billion compared with £10 Billion for new-build (Barbour, 1998). Research by the author over recent years has identified a shift from the 'received wisdom' of Planned Preventive Maintenance (PPM) programmes to more responsive practices using technology to get closer to the customer. This paper integrates work published by the author under titles such as Just In Time Maintenance (1995, 1997), Call-Centred Maintenance (1998) and Intelligent Building Care (1999) to demonstrate how the new approach to building maintenance with a focus on care for the customer and a service culture is evolving.

Keywords

Care, facilities management, maintenance, procurement, satisfaction

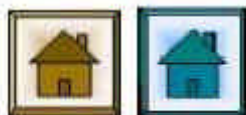
Introduction and Background

As identified in an earlier paper by the author “Maintenance of buildings and estates has long been portrayed as unattractive, a ‘Cinderella activity’, a ‘slightly inferior branch of the industry.’ (Seeley, 1976; Milne 198; How Son and Yuen, 1993).” (Wood, 1997)

However, a survey (Barbour, 1998) has subsequently estimated that the UK market for maintenance and related work is £28 billion, compared with £10 billion for new buildings.

In further papers (Wood, 1998a, 1999b) the author has observed that the “focus of building research and development is very substantially directed towards the new build sector” but that this may be changing. “For instance, in the commercial sectors we have seen the growth from nothing to an estimated \$1300 bn market for the discipline known as Facilities management.” (Lowe, K, 1996).

The facilities management (FM) discipline recognises the value of a building, or stock of buildings to the effective and efficient carrying out of an organisation’s business. Inadequate or poorly-maintained buildings may result in losses of production or productive capability. There may be direct losses due to unavailability of buildings or parts thereof or the services within, and there may be



losses due to effect on staff morale and motivation. Such losses may be qualitative and/or quantitative.

At the same time, technology and management techniques have been developing in ways which are enabling maintenance services to be reconfigured. Studies by the author have codified a number of recent developments, including:-

- Just in Time Maintenance (Smyth and Wood, 1995)
- Call-Centred Maintenance (Wood, 1998a)
- Intelligent Building Maintenance (Wood, 1998b)

More will be said on these later in this paper; suffice it to say here that common features include:

- technological ‘connection’
- responsiveness to need
- a service culture
- customer focus

These approaches have challenged the ‘received wisdom’ of planned preventive maintenance programmes

Planned Preventive Maintenance

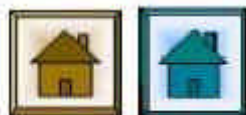
Noble (1980) described planned preventive maintenance (PPM) as “the ideal maintenance situation in which the condition of the property is kept within predetermined limits by a pre-planned programme of preventative work, ...” He went on to compare building maintenance unfavourably with commercial aviation, “In buildings, defects are more readily tolerated”. Lee (1987) describes PPM as “a concept which is probably more applicable to plant and equipment ... but there are certain building elements which justify this treatment.”

PPM has become probably the main approach to building maintenance, with property managers and surveyors endeavouring to squeeze as much identifiable maintenance work into planned programmes as possible, leaving response maintenance to deal only with emergency, unanticipated work. Almost by definition, PPM is ‘good’ and response maintenance ‘bad’.

This promotion of PPM stems very much from the maxim ‘fail to plan, plan to fail’. Typically, PPM features extensive, 5- to 10- year programmes of work, with repetitive replacements and industry-standard upgrades tending to take precedence over small-scale individually defined patch and mend repairs. PPM goes ‘hand-in-hand’ with “thinking big”.

The PPM approach presupposes and requires management and systems; commonly much data is collected, recorded and stored to inform repair/replace decisions, budget-setting and monitoring.

Sometimes PPM programmes have been informed by Life Cycle Assessments (LCA) and associated costings (LCC). Much has been written on this area, and the author’s 1997 paper cited works by Stone (1967), Southwell (1967), RICS (1983 and 1986), RIBA (1985), Flanagan et al (1989) and Ferry and Brandon (1991).



However, the author believes much of the application of LCA and LCC techniques to be of variable value with ‘answers’ influenced strongly by, for instance, choice of appropriate interest rates and estimations of decay rates. This is further complicated when we consider ‘what is life?’, for instance in the context of developing concepts of sustainability including for example ‘cradle-to-grave’ assessments of embodied energy.

Involvement in the promotion, production and execution of many PPM programmes over years past has given the author much opportunity to reflect upon the benefits of PPM.

A common complaint, particularly from personnel involved with the day-to-day operation of buildings and their maintenance, has related to the discarding and loss of unutilised service life. For instance, it would be typical to replace whole office-floors of fluorescent light tubes after a small number had failed. Similarly, entire estates of publicly-owned houses would have their roof coverings or windows replaced, although perhaps only one or two had failed. “Prevention is better than cure” – but it may be more expensive and unjustified.

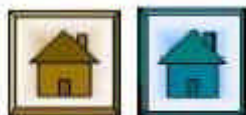
Challenging PPM

The author’s interest and experience in PPM, particularly in the public housing sector, gave rise to a proposal to research maintenance practice in other building types. Investigation of the supermarket sector revealed that planned preventive approaches had been largely succeeded by ‘Just-in-Time-Maintenance’, which was defined (Smyth and Wood, 1995) as “Getting the maximum life from each (building) component and piece of equipment, leaving repair or replacement until the component is broken or fails to function, yet taking action prior to it having a serious effect on the performance of the organisation.”

The same electronic connections between the checkouts and headquarters that enabled information to be transmitted about product sales were also enabling temperatures of refrigerated cabinets to be monitored and remedial attention activated remotely, and perhaps automatically. Such ‘technology transfer’ was also mirrored, and its value enhanced, by the parallel transfer of management techniques. One of the contributors to the economic success of the UK supermarket chains has been their supply chain management – they have built strong long-term relationships with suppliers, based on high quality and reliability. The study identified that the client was increasingly expecting its maintenance service providers to adopt a similar approach, and procurement systems were adapted accordingly.

Existing maintenance service providers were engaged in discussion with the client to determine what might be reasonably attainable performance standards, response times and related unit rates. One-year term contracts were drawn up, with intermediate break- or renegotiation- points to protect both parties in the event of serious misunderstanding or miscalculation, and with options to extend for a further period.

Over time, service providers have been able to offer, with confidence, quicker response and cheaper rates, with associated longer-term contracts.



Customer Care

The supermarket study has shown something of the scope for developing beneficial long-term relationships between clients and contractors, as trust is built and reliability achieved.

This is now to be compared with the general image of the construction industry, often characterised by:

- late delivery
- extra costs
- defects and low quality
- poor skills
- adversarial relationships

It is common for builders, particularly small, general builders, to concentrate on the issues of price and managing a fluctuating workload, at the expense of focusing on customer care.

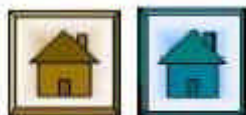
Smaller builders, and those involved in maintenance especially, also tend to comprise personnel with low, if any, qualifications. Those qualifications are also more likely to be craft-related than management- or professionally- orientated. A City & Guilds Certificate is perhaps the most likely and a Higher National Certificate (achieved by two years' day-release study) is the highest normally found. Degrees are still relatively rare in this field. Many in the industry have had no education or training in business skills. (Wood, 1999c)

Dissatisfaction with small domestic works particularly, and including repair and maintenance work, has been increasing, and complaints about builders to the UK government's Office of Fair Trading now exceed those about second-hand car dealers (DETR, 1998). This situation has spurred the UK government to launch an initiative, "Combating Cowboy Builders".

The 'Cowboy Builders' task group, under the chairmanship of Tony Merricks of Balfour Beatty, promulgated ten proposals for consideration, and the consultation period on these proposals is shortly to close. Proposals included:-

- the encouragement of the provision of 'approved builders lists' by local authorities;
- the development of the Construction Skills Certification Scheme (CSCS) for use by domestic customers;
- extension of the Building Regulations;
- greater involvement by lenders and insurers;
- ABTA - style bonding

CSCS is administered by the Construction Industry Training Board (CITB), financed through the continuing levy on construction firms. In essence, certified individuals carry colour-coded cards that indicate the level of skill or competence demonstrated. It has been noted already, however, that many of the recognised construction qualification, including National Vocational Qualification (NVQ), do not cover business skills, and it has been recognised that this deficiency should be redressed. It has also been recommended that 'approved' or 'registered' or 'accredited' building firms should be required to maintain a minimum proportion of suitably qualified personnel.



An example that the 'Cowboy' task group considered was the mandatory registration of builders recently legislated by the State of Victoria in Australia. The author is aware of research that has been undertaken into the development of the Victoria regime (Georgiou et al., 1998) and looks forward to publication of further research relating to its effectiveness.

In the meantime, the lack of such registration or regulation in the UK has encouraged at least two organisations, the Automobile Association (AA) and Green Flag Insurance to offer building maintenance services using vetted contractors.

AA and Green Flag

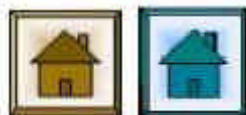
The author's 1997 paper identified that "Building contractors are already facing competition in the domestic market from trusted organisations like the Automobile Association and Green Flag Insurance using their communications infrastructure linked to certified trained personnel and guaranteed delivery." Dubbing this Call-Centred Maintenance, the service was examined in more detail and reported in a subsequent paper (Wood, 1998a). Both AA and Green Flag Insurance instituted schemes for vetting their contractors, including pre-qualification and periodic inspections. By way of illustration "For the AA, each company is visited at least once a year, unless there are already concerns, to monitor changes. Of 20,000 firms inspected, 2500 either met the AA standards or were prepared to work to them, and the number now engaged is about 500 as the AA works towards preferred supplier' arrangements. Already jobs such as damp-proofing or drain-cleaning are managed by large national or regional companies whereas more rural and jobbing emergency call outs may still be handled by smaller firms." (Wood, 1998a)

It may or may not be significant that subsequent to that report in 1998, the AA decided to 'return to core business' and withdrew from the building maintenance market. What is relevant here is that these organisations had identified and served a market for trustworthy and reliable building maintenance services.

Call- Centred Maintenance

The development of this concept has been discussed elsewhere (Wood, 1999b); suffice it to reproduce here that features include:

- service culture and infrastructure
- substantial customer base
- membership/subscription
- brand identity and loyalty
- reliability and trust
- trained personnel
- care and quality 24 hours a day
- vetting of contractors
- certified skills
- business skills
- communications infrastructure
- regular inspections



In short, the subscriber or member, calling perhaps in some distress, is dealt with politely and sympathetically from a welcome “Good evening, [Name]; how can I help you?”, through a menu or decision support system to “someone will be with you within ..[n]..minutes.”

The customer does not need to know the infrastructure behind the human interface, only to have confidence based on and reinforced by good experiences that the service will ‘deliver’ satisfactorily.

The Call Centre can provide:-

- single point of contact
- 24 hour service, 365 days a year
- a friendly voice (and possibly face)
- reliable service
- clean, tidy, careful, high quality work
- all-in-service
- surprise-free service

Intelligent Building Maintenance

It is not intended to dilate at length on this development, which is discussed in two related papers (Wood, 1998b and 1999a). The key here is the bringing together of data, often available in voluminous quantity collected by sensors of a wide variety of kinds (and communicated to ‘HQ’ by the electronic connections already referred to) and combining that data with experience. This experience, a facet of intelligence, may be human or artificial and would be expected to develop and change over time, in essence to learn. Thereby an appropriate response or intervention is informed or activated

Monitoring and activating systems and devices have become sufficiently sophisticated that interventions at the level of individual choice are now possible if so desired and briefed.

It is contended that response at this level of sensitivity is worthy of recognition in a way that differentiates it from mere ‘maintenance’ and the term ‘building care’ is apposite.

Building Care

Building care represents a paradigm shift in the understanding and practice of maintenance.

Features of building care include:-

- intelligent use of technology
- ‘light touch’ management
- responsiveness
- control generally at the individual level
- congruence with corporate strategic directions



To attempt a definition:

Building Care is the pursuit of the enduring supply of the best environmental conditions in which to support the corporate objectives of the organisation.

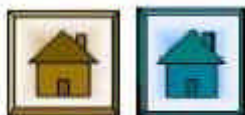
Naturally there will be difficulties in attempting to meet potentially conflicting demands of individuals and 'the corporate body' and in balancing needs and wants. Essential first steps (and which would need to be continuously revisited, reviewed and revised) would include identifying those wants and needs.

Comfort and control are important and terms like 'best practice', 'empowerment' and 'realising potential' are appropriate considerations. Perhaps the concept of 'care' demands a softer rhetoric than that associated with the 'oily rag' approach to maintenance; re-describing, re-learning and refocusing rather than re-engineering.

The approach is congruent with such concepts as 'experiential learning' (Kolb, 1984), the 'reflective practitioner' (Schön, 1987), and the 'learning organisation' (Senge, 1990).

Conclusions

- Building users are looking for service
- The 'conventional' construction industry has been losing markets to 'non-traditional' suppliers with service cultures, such as catering, cleaning, security and motoring organisations.
- The market for reliable customer-focused maintenance services is substantial; the construction industry is responding slowly to market needs.
- Maintenance providers have been re-engineering service in response to user demands.
- There are models of customer care from which the building maintenance industry can learn.
- Technology is available to assist effective responsive maintenance; intelligent application is required.
- The construction industry has a poor record of learning; personnel are poorly qualified; business skills are often lacking; closer links between construction and education are needed.
- Although maintenance is not 'sexy', there is scope for redefinition and refocusing with a developing concept of 'building care'.



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