PROBLEMS IN PROGRAMME IMPLEMENTATION

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ABSTRACT

The paper looks at the implementation of programmes or projects of technically improved housing and argues that the problems in programme implementation increase in direct proportion to the "distance" between the programme's designers and its implementors. The distance measuring the gap not just in physical terms but also in political, technical, financial and socio-cultural terms.

Every country, every city in the world has its "housing problem",
usually expressed as a shortage of housing units, or of inade-
quate housing units. The solution to most of this kind of housing
problem is easy enough to devise on the drawing board. This is
particularly true of the technical aspects of housing construc-
tion. After all, in engineering terms the calculations required
are of the most basic kind and even a large project, or programme,
is made up of an assembly of single units. Similarly, the onsite
operations can be controlled by straightforward management tech-
niques such as PERT & PPBS, critical paths and the like. Yet the
track record of programme implementation remains poor if not
abysmal. The actual number of housing units built are far below
the numbers required, and even below the numbers programmed.
Why should this be?

To some extent this is because of the nature of housing. To
quote Yona Friedman, "Housing is everybody's concern...." and
thus subject to kinds of enquiry as other projects such as high-
ways and dams are not. At the same time, housing projects are
also subject to all the other problems that beset other
programmes during implementation.

In order to examine some of these problems, let us assume we
have a technically competent design for a housing project that is
intended to improve upon the existing house types with better,
cheaper, safer and more durable units. Despite this, the chances
are high that either no programme implementation will take place,
or if it does, it will be far short of the original programme.
The problems that are likely to be encountered are categorised
in this paper for ease of reference into political, socio-
cultural, technical, financial and are looked at in turn.
However, before we do so, it is important to indentify the
primary actors concerned with programme design and implementation.
1) The Client; that is the person or institution commissioning
the designer; in housing programmes, increasingly the client is
a public authority carrying out its designated function rather
than one personally involved or concerned with the use of the
eventual end-product. 2) The Designer; that is the person or
team of persons commissioned to produce a design solution in
response to a given brief and includes such professionals as
architects, engineers of various specialisation, economists and
sociologists. 3) The Executor; that is the person or institutions
who will be responsible for implementing the project or pro-
gramme in accordance with the design specifications and include
contractors and builders. 4) The User; that is the persons who
will eventually move into and use the end-product built by the
other three. Often, of course, two or more roles may be com-
bined, as for instance that of the executor and the user in self-
build projects.

Now as to the different kinds of problems in programme
implementation:

Political: The various political problems that beset programme
implementation can be summed up by the word "Motivation", or the
lack of it. The designer should ask "Why does the client want to

build these houses?" or better still "Does the client want to build these houses?". In practice most designers are so keen to get on with the job of solving the technical problems involved (quite apart from the benefits of being commissioned) that they do not want to question the fundamentals - or if they do, are content with the public/humanitarian reasons put forward by the client as part of the brief. No doubt the publicly stated reasons play a part in the motivations of the client, but often there are deeper, overriding private reasons and expectations that the client has in commissioning a designer. Thus, though "affordable shelter" might figure large in the brief, few clients are happy at the prospect of unveiling a project of one-roomed mud-houses or of improved sewerage or anything else which might be construed as a "lowering of standards" below the dreams of modernity that he has been selling as a politician.

On the other hand, the client may well agree to commission the designer for a project if that enables him to achieve other ends. For example, aid or loan packages might come with preconditions that some or all of the funds be spent on housing the poorest of the poor. In which case, once the programme has been designed, approved, and the loan secured, its implementation is allowed to lapse or its costs allowed to drift upwards so that the houses can only be afforded by better off sections of the community. This is, for example, the fate of most site and services type projects. Similarly, when most finance ministers push ministers of housing to agree to accept loans from other countries, it is not because of their interest in housing, but because of the softer terms at which the foreign exchange thus becomes available to the Treasury.

Then there are the more straightforward political motivations of using housing projects as a 'payoff' for electoral support, and conversely of lack of motivation to implement a predecessor's project for which no kudos will accrue to the current incumbent.

Likewise, an "interim government" is unlikely to favour projects which have a longer term maturity than their own period in office, and such projects are likely to be shelved.

Since these kinds of objectives are not stated publicly, a designer who is unaware of them is likely to produce a solution that is not going to be implemented, or if it is, will not be pursued vigorously. The nature of these problems is such that they can be overcome only by a designer who is aware of the political motivations of the client and this can best be done through first hand observation or a familiarity with the situation. A design is likely to be less than satisfactory if it is done in isolation or removed from the realities of the environment in which it has to be implemented.

Socio-Cultural: The kinds of problems that are likely to crop up under this category have to do with acceptability. If the design is not acceptable in socio-cultural terms, it is

not likely to be implemented with enthusiasm.

We have already mentioned the role modernity plays in political terms. It is even more important for the users of the project. A design might well wish to replicate the prevalent forms of indigenous housing in his solutions by invoking the form of the traditional African round houses or the conical thatch roof in an effort to make the new designs acceptable - whereas the reality may be that for those presently living in these traditional houses, the forms are not romantic but symbols of their backwardness and lack of development. The users may well yearn for the sterile concrete box that passes for "modern".

House plans that orient doorways, beds and toilets to culturally unacceptable directions might well be spurned, regardless of their technical advantages. Similarly, concern for privacy might well outweigh considerations of cost. Fear of "ill-winds" or of insects and reptiles or of burglars might well lead to blocking up of the permanent ventilation vital for comfort.

Whereas in the design of a new or unfamiliar structure like a grain silo or a school, people might overcome their own reservations and accept technocratic answers because they may have no yardstick against which to judge, housing is a different matter. Housing is everyone's concern.

For better or for worse, the houses they have been living in are known to them and are an intimate part of their lives. The introduction of a new design is, ipsofacto, suspect. It is not that people are conservative and traditionalist, but rather like Michael Lipton's farmers, they are "risk-minimisers". Especially if they are poor, a house represents too big an investment to be experimented with - particularly at the say so of some outsider. The rich can afford to be fashionable, the poor must stick with the tested and the tried.

If the designer is not familiar with the socio-cultural environment it is likely that the project will meet with objections and again, any implementation will be less than enthusiastic. The least that can be expected is that the house designs will be altered by sub-divisions and additions. Door frames will be removed and widened if, as in Anguri Bagh in Lahore, people cannot push their motor-scooters through, or if as in Korangi in Karachi, the dead can't be carried out on their beds. At worst, of course, the houses will lie empty and abandoned, as was the case for years with the flats at Iqbal Town, Lahore, and the construction of further units will be stopped. Here again, a designer working at a distance from the users will find it difficult to ensure the acceptability of his designs. Social surveys might help, but they can cope mainly with those questions that the designer has already thought to ask, and in any case most surveys are done before the designer has any concept of what he is going to produce. Very few surveys are of the market research/user reaction type which test acceptability or satisfaction with a given design.

Obviously all other things being equal the greater the familiarity of the designer with the socio-cultural environment, the fewer the problems when it comes to implementation.

Technical: The problems in this category arise largely because of a lack of familiarity. Working in a particular context, designers tend to use conventions in their technical drawings and instructions, to the extent that like users of jargon, they do not even realise that they are doing so until someone misunderstands their instructions while implementing their design. Take the case of the designer of a four-storey building for which he wanted to have a facade of perforated cement blocks. Since he was not sure of the particular patterns available, he left the facade blank with an asterisk drawn in one corner. In the note below he pointed out that the actual screen block will be decided later. Imagine his surprise when he made a visit to the site and found the front wall made of solid blocks with an asterisk neatly sculpted to scale, in one corner. Careless or incompetent reading of technical drawings and specification has often led to misplacement of reinforcement bars, often of wrong sizes. The classic example must be of the inexperienced contractor who shuttered up a roof, poured in the concrete and then proceded to stick in two-foot lengths of reinforcement at regular intervals so that they stuck out like the starter bars he had seen on other sites - with no steel in the slab at all. That these kinds of practices do not lead to more disastrous results is largely due to the belt and braces recommendations of archaic building codes but a designer unfamiliar with execution practice in many countries could end up with problems if he produced a finely calculated structure in order to cut materials and costs.

Given the chronic shortage of water in Karachi, recommending normal water borne sewerage systems is a risky business and fraught with problems at the best of times. Furthermore, the designers of Karachi's metroville scheme had been alerted to the local sanitary practices and had designed and sized the sewerage systems accordingly to allow for bits of stones, bricks, tiles and clay pots as well as the usual toilet paper. Nevertheless, by connecting pairs of back to back toilets to the mains sewer using a single waste pipe, which makes good economic sense, they introduced a built-in problem source. The cost savings were nothing compared to the subsequent squabbles and disputes that arose each time someone blocked up, not only his, but also his neighbours pipes.

That a little technical expertise can be worse than none was demonstrated in South India where the indigenous stoves which filled the small windowless rooms with smoke, were replaced by a new smokless version at the recommendation of visiting experts. Within a year the thatched roofs started collapsing as the vermin that infested them were no longer being kept at bay by the fumes from the stoves. In another context, much of the hard work of designers spent on reducing costs is negated by contractors who price work on the basis of previous experience - for example the

designer might very carefully worked out the sizes of precast
members to avoid using lifting tackle, but the contractor will
probably not appreciate this from the drawings and specifications
and so not reduce his quotation and the hoped-for savings are not
passed on to the client. Similarly, savings that one would
normally expect by leaving block or brickwork unplastered, or
concrete 'as struck' are lost because of the poor quality of
workmanship means that the contractor will plaster over the
work in sand cement and finish it off so as to appear unplas-
tered.

Often the reintroduction of previously common place technology
proves difficult. That is the case with barrel vaults or lime
mortar in Lahore. Though these were traditional indigenous
techniques and materials their usage has virtually disappeared
and current practice has meant that contractors charge more for
working with these "new" methods, thus making them no cheaper
than the more acceptable and ubiquitous concrete slab and sand-
cement mortar. So, here too we see that designs that would
appear to be technically sound can be problematic in practice
and the designer who is unfamiliar with the context could
inadvertantly increase rather than reduce or solve problems.

<u>Financial</u>:   These problems arise basically due to the fact
that the costs of building are higher than the ability of users
to pay for them. There are two causes for this: either because
not all the costs have been calculated or because special cir-
cumstances were created which distorted the incomes of the users
upwards or the costs of construction downwards. The most
common example of the first condition is in projects which
provide some part of a house and expect the user to complete it
later on. More often than not, the repayment for the initial
allotment exhausts the users capacity to pay for housing. The
further additions are then beyond their capability to implement.
This is particularly so if the additions have to be built to pre-
determined designs or standards which are invariably higher
than the minimum and so more expensive. The possibility of
augmenting incomes by taking in lodgers or using the building
for work or commercial or other non-residential use is usually
inadmissable under the terms of most allotments.

Housing programmes are often subsidised by the government or the
funding agency which means that it is unlikely that the pro-
gramme can be self-sustaining and will come to an end as soon as
the subsidy is withdrawn. Secondly, the fact of the subsidy
means that resources are being transferred at below their
market price and there will be great pressure to exchange the
house for its market value in order to capitalise on its
current value, and so the subsidy has the effect of helping, not
the groups for which it was intended, but the better off ones.
The larger the subsidy element, the less the benefits are likely
to remain with the group for which it was intended.

A very common procedure for implementing housing and other
programmes is the Pilot project approach. In theory it makes

sense to initiate construction by building one or a few units which can be used to test the appropriateness of the design as well as user reaction before embarking on full-scale implementation.

In practice there is the problem that as a "test-case", the pilot project is treated with extra care of the sort that will not be available for the rest of the programme. Much attention is focussed on the Pilot project, both by the people working on the project as well as the general public and the media. Technical supervision and manpower is to hand, as are materials, authorities to proceed and a very high level of motivation. It is in everyones interest to ensure the success of the Pilot project. Once that is completed, the implementation of the rest of project is handed over to more "normal" processes which are subject to delays and deterioration in quality as the level of technical supervision drops, supply of materials slows down and so on. Often, of course, the Pilot project is seen as an end in itself, and little or no thought is given to the implementation of the rest of the programme.

A lot of the problems in implementation arise from the conceptual separation between designing and implementation. Often the design is altered for the convenience of the designer, rather than with a view to its execution. For example, the grid-iron layout owes as much if not more to the T-square than to any considerations of servicing let alone the physical features of the site. Most designers feel that once the design documentation is completed they have completed their job and some one else should be responsible for its execution. Implementation would improve if designers took as much care of the details of implementation of design and identified who was to do what at each stage and ensured that each executor was in fact available and capable of implementing his particular task.

Particularly for large projects the administrative and organisational capacity is usually less than ideal. Often the procedures that exist or the experience to date has been in the implementation of small schemes and the mere enlargement of these is not sufficient since the difference is not merely quantitative but qualitative.

Conclusion: It is evident that the problems that arise during implementation are such that they cannot be easily foreseen, since they emerge out of the peculiarities of each situation. To produce a programme that can be implemented without many problems would require an intimate knowledge of the political, socio-cultural, technical and financial environment of the executors. For this, it is not enough to be from the same environment as that where the programme is to be implemented but rather to know it.

To the extent that the designer is familiar with the environment of the executor, he will be able to forsee and forestall

problems in implementation, but the larger the gap between the designer's environment and that of the executors, the more and more likely it is that problems will occur during implementation.

A lot of what has just been said might be thought to apply only to a situation where the designer is a "foreign consultant" and not to professionals working in their own country. In fact the contention is that the ability to foresee potential problems is lessened whenever the "distance" between designer and implementer is increased. This distance is not merely one of physical distance as there is when a designer sits in the United States and produces a programme for implementation in Pakistan or indeed if the designer sits in an air-conditioned office in the capital and designs projects for implementation in the country-side. The "distance" that creates problems in implementation is also one that can be used to measure the gap in socio-cultural, technical or political terms between designers and implementors.

The same processes that transform us into professionals tend to alienate us from our environment and our country-men. In order to become "good modern designers" we study the work of the big prima donnas: the Corbusiers and the Mies Van der Rohes. We undertake design projects at school that have walk-in cupboards if we've seen an American magazine, or a bidet if we've seen one from Europe. Our drawings are done using modular co-ordination and have finely calculated tolerance levels. In the end, neither client nor contractor understands the drawings and specifications which we produce in copy-book imitation of RIBA and AIA recommendations. We expect contractors and workmen to understand our technical drawings yet do not think of producing design drawings in a way that can be understood by the executors.

Indeed if we were to design for alien clients we would perforce enquire into their lifestyles, yet when we design for users from whom we have been alienated by our technical, professional education, we proceed as if there was no difference - no distance between us the designers and them the implementors. Then, when this leads to problems, we say the clients/users do not appreciate good design or that the contractors are uneducated and the building industry is underdeveloped.

To return to our original question the implementation record is so poor because most of the designers come from environments considerably removed and at a distance from that of the implementors. The political motivation of the designer is far different from that of the implementors. Usually the cultural context, if not the culture of the designer, is quite other than that of the builders, as is the level and kind of technology that each is used to and as indeed are calculations

and commitments of finance - and in any case the designer does not usually see himself as part of the implementation process, but is removed from it. The further removed he is, the greater the problems.

Thus, one can argue that the problems in programme implementation increase in direct proportion to the "distance" between programme's designer and implementor. The distance measuring the gap not just in physical terms but also in political, technical, financial and socio-cultural terms.