

# LIFE PLANS

*Applying co-design to architecture can create buildings that change with the times and improve public service delivery*

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**D**uring my lifetime, a revolution has swept through public services and, while its work is far from complete, expectations have been transformed. Unfortunately, the same cannot be said of buildings. Advances in engineering and IT are widely touted as transforming architecture, but the process of defining the brief and the budget for a building remains remarkably unchanged. Without the broadest input into the briefing process from potential users, buildings rarely enable and support the full breadth of their potential use. The consequence is a built environment that is poorly suited to the needs and expectations of the 21st century.

Well understood in service delivery, co-design is a concept that incorporates the input of potential users in commissioning so that the final product, service or building is better tuned to their expectations. In his work in the 1970s, the urbanist Christopher Alexander demonstrated the practical utility of this approach to buildings. Unfortunately, his ideas have never taken hold in architecture.

While the costs of providing a service accrue over time and concurrently with the benefits or income they provide, buildings represent seemingly large, one-off investments, one step removed from their use. Financial models that connect income over a future period with this initial construction cost are widely used, but are rarely instrumental in the design process. Construction expertise is increasingly specialised, generating impenetrable language and practices that act as barriers to user engagement. Short-term risk is the overriding concern: potential delay, increasing costs and a general fear of allowing non-experts in on the process. Yet the direct and indirect costs of a building over its lifetime are normally hundreds of times its construction budget

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and the risk of these not delivering their full value is rarely interrogated effectively.

As a current example, the government's prison transformation programme will see £1.3bn spent to build nearly 10,000 prison places over the next 30 or so years. This is a big number, but the direct costs of re-offending are estimated to be between £9.5bn and £13bn a year (a staggering £390bn over this period). Prisons form only a part of the criminal justice estate, but if their design can have a meaningful impact on rehabilitation, the case for greater investment is clear.

Debates about the value of design have also recently raged publicly in relation to schools. The Building Schools for the Future (BSF) programme in the 2000s placed great emphasis on design quality, but is now regarded as an example of profligate government spending due to a lack of evidence that it helped improve school exam results. There is of course another debate to be had about whether that is the sole purpose of a school. While there are still many talented architects working with individual and independent schools, producing great buildings, the dominant current philosophy appears to be that school buildings should be considered as neutral boxes that do not fundamentally influence the business taking place inside them. This ignores the value of investment, which can only be understood over a much longer period and within the context of the other factors that affect the education experience. Buildings do not make good things happen, they only enable or hinder them, making the connection between design and use difficult to measure in simple terms.

This disconnect between commissioning and use is partly due to a general lack of education and awareness of the built environment. People unconsciously accept sub-optimal buildings; because they assume the status quo exists for good reasons that they do not understand. The imagery used



IMAGES: COVER IMAGES







## “WE NEED TO OVERCOME THE CONCEPTION OF BUILDINGS AS SIMPLE CONTAINERS”

to promote architecture exacerbates this, with its emphasis on as-yet unused buildings and eye-catching aesthetic gestures; neither is a true measure of good design. While there continue to be well-designed buildings of all types that counter this trend, they remain exceptional and it would be hard to say overall that the design of the built environment has substantially improved in recent decades.

If we are to reverse this trend, we need to overcome – and help policymakers overcome – the conception of buildings as simple containers. Whole-life costs still take far too narrow a view of the power of design to release the full potential use of buildings. This is not a call for profligacy, but, as with the wider economy, construction is not a zero-sum game. If a bigger budget can be spent in a sophisticated and well-informed manner, it can generate many more times its own value in social and economic benefit over its lifetime. Conversely, the costs and constraints of poorly designed buildings accrue ever more rapidly as they are used.

So, in the absence of simple evidence, what can we learn from? The evolution of digital products is deeply entwined with society and provides a useful analogy for contemporary architecture. Buildings and the activities they accommodate can be thought of as one, in much the same way that tech companies work simultaneously with hardware and software.

Apple’s key computing innovation was to design hardware and software together, but this relied on excluding variety and uncertainty. Another example is Linux: open-source software that develops independently of, but in parallel with, rapid increases in processing power and diversifying uses. Increasing expectations are a key driver; no one would try to run modern software on an early personal computer, but this is what we are attempting with our built environment. In Apple’s case, expectations were largely generated through marketing. The iPhone was an exercise in selling a more personal experience of technology; specifically, Apple

technology. Linux took a different tack, relying on the iterative refinement of a myriad of technical users with an expectation of open-ended capability.

Buildings have tentatively learnt from both approaches. Derided at the time, the V&A’s 1980s advertising campaign – ‘An ace caff with quite a nice museum attached’ – began a trend that is now ubiquitous: good coffee as a requisite part of a good experience. Coffee might draw people in, but the modern museum or gallery experience itself is dependent on creating contained and controlled environments, much like Apple’s philosophy.

Public services commonly have more complex requirements and such buildings involve a proliferation of technical experts in their commissioning, more akin to the Linux example; but this technical contribution tends to overrule the potential for broader input from public users and for future flexibility. Hospitals, universities and prisons are often poorly designed for adaptation and expansion, a process that begins almost immediately after the building is opened, generating a permanent Gordian knot. The focus in the design process instead is on the narrowly defined technical performance of buildings; while this has undoubtedly improved over recent decades, the ability to accommodate increasingly complex, fluid and unpredictable use has not.

A good example of this can be found in relation to housing. In the three decades following the Second World War, the British state undertook an unprecedented mass house-building programme. Some of these modernist estates were built too cheaply and quickly, resulting in failures of the building fabric, but in many cases a combined or even greater problem was the cost of maintaining them. Commissioned during an extended period of growth in public services, they were designed on the assumption that the services needed to support them – waste collection, landscaping, cleaning and management of shared spaces – were plentiful and

affordable. As that assumption changed over the last quarter of the 20th century, the cost of these services became unsustainable and many estates fell into disrepair and squalor. Some stood for half a century before being demolished and rebuilt, surrounded by pre-war housing that continues to stand, partly because it continues to be serviced in the same, adaptable way. The costs of rebuilding these estates are still being sharply felt, but are as nothing compared with the wider costs of whole sections of society living in squalid and unsafe conditions for many years. There are also well-designed modernist estates that provided much better quantity and quality of housing than existed before and still do. The purpose of this example is not to critique forms of architecture, but to draw attention to the way that the design of a building and its ongoing use are deeply interconnected. The irony of the modernist example is that it is precisely because these buildings were designed around a model for their maintenance that they failed. The failure was that this model was not able to accommodate change.

In his book *The Oregon Experiment*, Alexander outlines a co-design process for the incremental expansion and adaptation of the University of Oregon. The key principles are that the users of the campus have crucial knowledge to contribute and that the extension and adaptation of the buildings is a continual process. It seems apt that Alexander’s ideas have been most influential in the field of computing: open-source software using ‘blocks’ of code that his work inspired have made programming accessible to the public. While a similar approach is gradually taking hold in public services, the architecture that is designed to accommodate them has yet to follow. Some commissioners in different fields are beginning to rediscover this approach. A few local authorities are experimenting with co-design for the redevelopment of housing estates, and individual projects such as school expansions and community buildings are often exemplars of co-design on a small scale. Indeed, the RSA Transitions prisons project, to which I contributed, aimed to demonstrate how services and buildings designed together with their users could release latent social value from public assets.

Far from increasing the cost and risk of a building, co-design can be deployed to understand future patterns of usage, radically expanding the design process through exploring and testing professional assumptions. Neither does user involvement transfer the activity of design from architects and other professionals to users; their role is to act as experts in how they use the built environment and as custodians of it into the future. While some designers may resist the interference of people not trained in design, the best examples of co-design are led by highly skilled architects and designers, resulting in beautiful buildings. The key

difference is that they accommodate change and subsequently take on a deeper kind of beauty that arises from a strong relationship between a building and its users.

Even though the limited examples of co-design are currently working against the grain, the tools and processes exist to be rediscovered and more widely accepted. This will only happen through the pressure of people’s expectations: we need to be much more demanding of our buildings. Meanwhile, policymakers, commissioners and architects need to understand risk in the longer term and realise the benefit of letting ordinary people loose in the process of design. ■

### FELLOWSHIP IN ACTION

#### TAKING ACTION

Open Cinema, a network of community cinemas founded and led by RSA Fellow Christoph Warrack, helps disadvantaged individuals and communities to move from exclusion to participation by giving them an opportunity to watch, discuss and make films collectively. With friendly volunteers and free food, it’s a safe and inviting space for those in need.

“We work wherever a community has a space and an interest to experience cinema,” says Christoph. “Each year, participants go on to education and work through our partnerships with universities and employers.” Pathways include bursaries for Open University courses and pre-apprenticeship programmes for participating companies. Last year, three individuals joined Cisco Systems and 11 gained full-time work in the company’s supply chain.

Since 2009, Open Cinema has opened 44 venues – from Cardiff, where it supports 56 nationalities, to Belfast, where it welcomes low-income families from different cultural and religious backgrounds. Open Cinema has been supported with £10,000 in RSA Catalyst funding. “We have had the opportunity to strengthen the purpose, methods and reach of our organisation,” says Christoph. With the grant, it has developed a strategy for longer-term national and international partnerships, built a new website and hired new part-time staff. In May, Open Cinema’s first country franchise was signed in Finland, where community cinemas will start opening later this year.

■ For more information, visit [opencinema.net](http://opencinema.net)