Changing building typologies forum – Observations from practice

Creating adaptable architecture

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For over 30 years, Rogers Stirk Harbour and Partners (formerly Richard Rogers Architects) have designed and contributed work to the built environment that has invited a myriad of interpretations, from architectural critics who look to judge its merit, to individuals who occupy and use the spaces defined within.

This contribution to JOSS provides a brief overview of a select number of projects from the practice’s portfolio of work. Where the concepts of adaptability and flexibility have remained at the core of its approach to design, and within the constraints of ever evolving design criteria and client demands, the practice has responded with an architectural style that embodies the notion of ‘permanence and transformation’ (Rogers, 1988). The article asks therefore how these buildings may begin to act as mechanisms for continuity and change to occur simultaneously, offering a reinterpretation of the traditional classification of building types as they look to accommodate long-term transition, whether this be technological, political, educational, or market driven.

‘Improvisation within a coherent totality’ (Rogers, 1988)
In discussing ideas of permanence and transformation, Rogers highlights the architect’s role as aiming to create ‘continuation of the Modern Movement by trying to expand its approach to meet constantly changing needs’. In addition, he suggests that in creating ‘a building framework where the programme, ideology and form can play an integrated and legible part’, an ‘architectural balance between permanence and change’ (ibid.) can be established.

This defining philosophy therefore not only facilitates the possibility for different building types within the practice’s portfolio of early work to adhere to the founding principles of flexibility and adaptability, but also remains an ongoing filter for future ideas to pass through. Stability and permanence are established not only within structural and configurational frameworks, with reference to Louis Kahn’s notion of ‘the served and servant space’, but also within a more subtle framework of conceptual, ideological and historical references. It is therefore within this generic spatial and ideological domain that possibilities for an adaptable space are facilitated. Furthermore, the separation of the service cores (servant space) from spaces of occupation and interaction (served space) creates a complex layering of both form and surface, beginning to define what is recognisable as an architectural style associated with the practice. Rogers describes ‘this dichotomy between the complete and the open nature of the building as a determinant of the aesthetics of the building’ (Rogers, 1988).

Completed in 1977, the Centre Pompidou is perhaps the defining example that embodies this philosophy, as Rogers and his team set out these key principles within the initial competition submission (Figure 1). The final design sees a building that through its structural framework and spatial configuration looks to respond not only to its contextual setting, but more importantly to the constraints and demands of the organisation and users it seeks to serve.

With cores and serviceable elements located towards the periphery of the building envelope, coupled with a truss spanning 15 metres, an open
plan space is created that acts as a ‘blank canvas’ for internal space planning to be continually redefined. The traditional idea of a boundary becomes blurred, as the whole of the west elevation acts as an interface between stranger, visitor and inhabitant, allowing physical and visual connectivity between the interior of the building and the public realm of the adjacent plaza.

The more permanent aspect is not only to be found in the modular structural framework but also in its historical reference to the steel pioneers who preceded the scheme by 180 years, with the design echoing Paxton’s innovative use of steel trusses in 1851 to create an exhibition centre that was both flexible and adaptable (Figures 2a and 2b). Although separated by generations of change, this example of postmodern architecture remains partly anchored to its architectural heritage, suggesting a design solution that is not only about innovation and evolution but also a reinterpretation of building type.
‘A hierarchy of legible parts from fixed to changeable’ (Rogers, 1988)

Completed in 1986, Khan’s idea of served and servant spaces is again revisited within the design of the Lloyd’s building, as Figure 3 illustrates how the principle of moving the service elements to the perimeter of the building creates a large open plan space. This enables a high level of visual connectivity, as a series of large convex spaces are established that maximise social interaction and the exchange of information that is paramount to the act of trading. It not only allows for flexibility of function and possible future transition, but also provides historical points of reference to the great market halls of an earlier era.

Here is a scheme where, hypothetically, sustainability and adaptability become intertwined. Rogers highlights the idea that as ‘normally the life of a building is longer lasting than an institution it is designed to house’, adaptability ‘will allow the life of the building to be extended as the user will be less constrained by an unchangeable form’ (ibid.). However, the Lloyd’s building, although guided by the same design principles and philosophical approach as the Centre Pompidou, is arguably more limited in its ability to adapt.

It would seem that although over its 30-year history the building has undergone both refurbishment and transition as it has looked to accommodate advances in technology, the practice of underwriting has also experienced its own transformation. This fact, coupled with both its recent listed building status and sale, will test how true to its sustainable and adaptable origins the building will remain. In being so intrinsically defined by the nature and legacy of the organisation that occupies it, any future change in either user or typology may be problematic.
‘As a mechanism for change against the constraints of socio-political relations’

Following the election of the Welsh National Assembly in 1999, a scheme was proposed to house the recently formed political administration. Completed in 2005, the new building (the Senedd) looked to introduce a series of well-defined public spaces within the realm of a civic building, creating an easily accessible viewing gallery surrounding the debating chamber. With the intent to make the political process more visible, and to offer a reinterpretation of civic space, the proposed design incorporated a 360-degree glazed envelope as both a metaphor for the transparency of the process of open democracy, and a symbol of national identity.

Although the design of the building seeks to reflect changing political intent by bringing politicians and the public together, in this instance the nature of political process itself could be argued as the more restrictive factor to change.

The success of the spatial layout in facilitating new types of engagement by establishing alternative possibilities of co-presence and separation is limited by the strong programme and long model of the organisational structure, with a snapshot revealing a relatively strict separation between these different user types (Figure 4).

Additional step-depth analysis (Figure 5) suggests a configuration that remains physically deep in its spatial properties, with particular inhabitants (the Assembly Members) located far within the building and separated from the visitors by numerous control spaces.

However, further interpretation reveals an affordance of high visual permeability via the creation of numerous visual links throughout the building (Figures 6 and 7), suggesting it is this aspect that begins to readdress the asymmetry and distribution of power between inhabitants and visitors (Figure 8), thus allowing the building to
Figure 5:

Justified graph representation (j-graph) of step-depth.

The public viewing gallery (pink) and the Assembly Members’ debating chamber (blue) are circled.

Figure 6:

Section through the Senedd building with visual links highlighted as view fields.
continue to act as mechanism for change against the constraints of socio-political relations rather than becoming just a symbol of transparency.

To conclude, this article has highlighted how the idea of permanence and transition is manifested within Rogers Stirk Harbour and Partners’ approach to design, suggesting this may facilitate the creation of a built form that could be described as ‘adaptive architecture’. The challenge is perhaps not only how to measure the possible effectiveness of these buildings to adapt to ongoing transition, as they look to accommodate evolving social, cultural and technological trends, but more importantly to continue to address the fundamental question as to whether, and if so, how adaptive architecture is possible in the first place.

References