Spatial Planning and Infrastructure

Curriculum Toolkit

Spatial planning and infrastructure share a common historical thread in the evolution of cities. Underpinning the making of plans and delivery of services is a fundamental belief in the ability of technical systems to contribute to an integrated, modern city. A fundamental belief in modern town planning as a means to control and direct city growth gives the impression that spatial planning guides infrastructure investment. This is not necessarily the case, as many practitioners would attest.

Whilst many have moved away from the master planning tradition, many country-planning systems still rely on its tenets. African urbanization is complex and overwhelming; the master planning tradition is no longer effective in dealing with its challenges as can be seen in the infrastructure failure experienced by many of the continent's cities. Not only is infrastructure delivery not keeping pace with demand, but the gap between infrastructure implementation and spatial planning has widened. Spatial planning directs very little; infrastructure investment continues *despite* plans. Large-scale infrastructural investments are generally implemented in the absence of forward or strategic planning. Many actors are involved in local scale service delivery.

What is it that planners need to know?

In the African context, uneven access necessitates creative planning approaches that build on large-scale interventions whilst acknowledging context and human needs. It requires an engagement with the many actors that play a role in the delivery of services.

Creativity is required in facilitating an effective relationship between spatial planning and infrastructure whilst at the same time being astute enough to harness the contributions made by the many agents implicated. It entails looking beyond the pipes and cables that are mapped on sophisticated Geographic Information Systems (GIS) and plotted on spatial plans. What is required is looking beyond disciplinary boundaries and uncovering the multiple energies and initiatives that could contribute to synergies between planning and infrastructure delivery and a dynamic that makes a meaningful contribution to the reordering of African urban spaces.

Points of Departure that inform this Toolkit

- Large-scale infrastructure delivery projects provide an opportunity for increasing the efficacy of spatial planning by enabling implementation
- This requires an approach to spatial planning that bears a closer relationship to delivery;
- It also demands a more nuanced understanding of infrastructure implementation that is mindful of the many actors that are implicated in this realm;
- It also requires an engagement with what happens when infrastructure fails; the role players that emerge from this dynamic and grassroots responses;
- The challenges posed by climate change and resource depletion requires a long term perspective that considers the ongoing sustainability of service delivery;
- Ecosystems services need to be considered as part of the equation;
- Insight into new infrastructures is required also that takes cognizance of information and communication technology (ICT) in the urban realm.
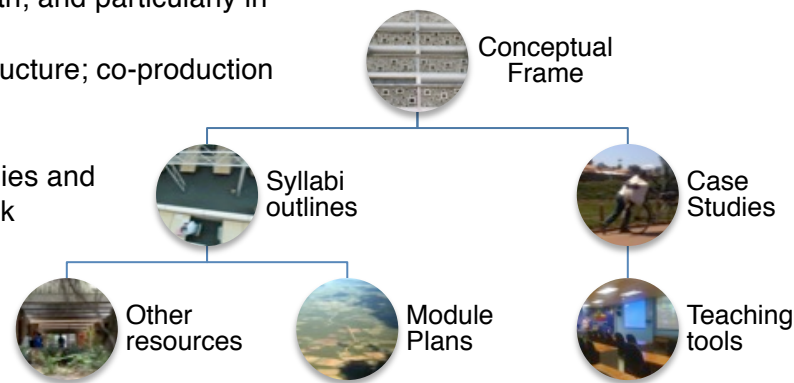
Toolkit Components

This toolkit comprises a number of elements that can be used together or separated out, depending on demand and need. It is also intended to be a 'live' resource. Users are invited to add to the toolkit…whether through documentation of cases, additions to the literature review or ideas on lecture delivery and knowledge co-production. Templates for doing so are included. (See figure below)

A Conceptual Frame

This provides a schematic overview in PowerPoint format of the bodies of literature that have contributed to the debates on the relationship between infrastructure and spatial planning. It also takes a conceptual stand on the lens best suited to deliver material on this theme. This *does not* include systematic review of the various service sectors and associated infrastructure. The review contains the following;

- The historical evolution of the relationship between city planning, infrastructure and city growth;
- Focus on the factors that have undermined this relationship; particularly market dynamics, technological change and the role of planning;
- Infrastructure in the Global south; and particularly in Africa – emerging themes
- The notion of agency in infrastructure; co-production and the role of intermediaries.
- Elements of a socio-technical perspective – assemblage studies and the contribution of actor-network theory (ANT).

Syllabi Outlines

Two outlines are provided;
- A post-graduate semester course on Urban Infrastructure
- A module on ICT and Development (semester)

Each of these includes an outline of teaching activities, pedagogical approach and assessment criteria.

Modules

Three modules to be included in a studio-based course for a project at metropolitan scale are included. They give specific pedagogical direction on delivery.

Case Studies

A number of cases from Africa and other parts of the Global South are included; they vary in level of detail. The cases include reference to themes that apply, learning outcomes and guiding questions.

Teaching Tools

Power Points slides, audio and video files are included here.

Other

Links to other resources such as film clips, audio and podcasts are referred to.