In order to be more responsive in terms of contextual and sustainable values, the design process should be comprehensive and integrative. This book suggests a plethora of guiding tools and techniques for design with regard to genius loci, and since design is becoming more universal, it also offers information on the contextual background of architecture in the Middle East. It incites young architects to hone their vision and sharpen their tools in order to grasp the triggers of human, cultural and environmental parameters through more responsible design in the era of globalism.

A redirection towards a more comprehensive approach will ultimately help architects to explore local cultures, to adapt to and adopt a universal civilisation without falling into redundancy, emptiness and meaningless design. This book aims to help readers take the first step on the journey towards assembling and nurturing its guidance and tools, but the pivotal element is each architect’s own creativity: the skills and abilities to advance the thinking and practice of design in complex cultural and environmental contexts.

Therefore, it is high time for architectural practices and schools of architecture to engage in further research on the context and environment of contemporary projects so as to develop a comprehensive and sustainable design approach. What is needed is applied research: an exploration of research-based designs in order to bridge the gap between local and international thinking and practice geared towards cultivating grassroots contextual designs.

Accordingly, enquiry-based design explores the design process as a research medium in order to cultivate good-sense design practices. Since the purpose of this book is to encourage the development of a more efficient way to meet contextual needs within creative design, enquiry-based design sets out to find the right balance between what the designer conceives and what the user experiences. It seeks enhanced communal experiences in the built project through highly responsive design that bridges the gap between design and reality.
It is geared towards addressing the trilogy of context, content and process. Context needs to be analysed in order to highlight all its components. Content is the project’s programme as required by clients and stakeholders according to the nature and size of the project. Process is the dynamic procedure of choosing the right scenarios where stakeholders and methods are defined with a clear implementation strategy. Accordingly, these three terms can be symbolised as follows: context is discovery (definition and building knowledge); content is design (anticipation and conception); and process is prospection (alternatives and scenarios).

This representational trilogy as a structural framework to practise contextual enquiry-based design can be simplified for students and young architects in the following practical steps.

1. **Description of the project (terms of reference – TOR)**
   This concerns how the project is presented by the client, and the objectives that the architect is required to follow. It defines the project background, and reveals certain issues to be explored that require specific expertise. In addition, it establishes terms of reference that set out the implementation challenges and deadlines. They also seek to evaluate the project in terms of categorisation, so as to estimate the scope and breadth of design and implementation required according to the intended outcomes.

2. **Statement of the project’s challenges (SPC)**
   The architect needs to have a clear idea about the statement of the project’s challenges in order to explore the key problems that the project poses in terms of opportunities and their counterpart constraints and issues that may hinder the creativity of the design process. It is a clear statement that the architect should make according to the TOR in order to understand major elements of the problem-solving strategy, and to situate the project in the context in which it is to be located. This framing of the project defines the subject of an inclusive site investigation.

3. **Context enquiry and analysis (CEA)**
   Context enquiry and analysis is a thorough and comprehensive study of the site. It goes beyond the conventional physical considerations that an ordinary architect would have, as explained in Chapter 2. It extends the field of enquiry to embrace holistically the historical, physical, biological, social and cultural layers of the locality of a project. In order for this enquiry to be pragmatic and lead to creative elements to be considered in design, each layer should yield a set of triggers relevant to design scenarios and solutions.
4. Authentication and benchmarking (AB)
Authentication and benchmarking is a critical stage in the design process that explores both theory and practice so as to investigate all the triggers deduced from CEA in order to establish the sustainability and contextual framework (SCF – see point 5 below). This is done through the analysis of similar contextual and sustainable projects whose validity and soundness have been proven. An authentication of different models of design vis-à-vis a given context would lead to an all-encompassing SCF.

5. Sustainability and contextual framework (SCF)
The sustainability and contextual framework is a synthesis of schemata which superimposes all explored layers of data that underline spatial and contextual qualifiers to be converted to design triggers. It is a guiding framework for orienting design so that it does not lose sight of the key sustainability and contextual elements that are often overlooked in favour of aesthetics.

6. Design qualifiers and values (DQV)
Based on AB and SCF, a set of design qualifiers and values are defined. They represent a guiding grid of qualifiers that can be translated into creative design solutions. This is a transitional stage that aims to transform constraints into design opportunities. The DQV can provide an a priori set of evaluation indicators for a contextual enquiry-based design.

7. Design scenarios (DS)
At an advanced stage in the design process, different problem-solving scenarios are triggered but with an artistic lens, in order to explore the SCF through deduced DQV. It is all about finding an angle of attack in terms of establishing the key guiding design tactics that can comprehensively boost design outcomes without subduing the critical elements of the functional programme of TOR, while fully exploring the rich elements of the site and context. A minimum of three design scenarios should be presented in order to find the strengths and weaknesses of each one and thus to find the ideal design master integrative scenario (DMIS – see point 8 below).

8. Design master integrative scenario (DMIS)
The design master integrative scenario is not the best scenario but rather the one that is most all-encompassing and comprehensive in considering the outcomes of all the previous stages. It is also the one that allows the design process to move forward so as to take its final spatial form, be it at the urban or the architectural level. This definitive scenario has to be finalised through technical details that boost its visibility as a master design for an architectural project or masterplan for an urban project, in which all the content is well represented graphically.
9. Feasibility strategy (FS) and environmental impact assessment (EIA)
In order to decide on the various actions that are necessary to reach the final executive technical plan (ETP – see point 10 below), a feasibility strategy and environmental impact assessment are needed. The FS involves the designer using economic and operational tools to help prioritise or optimise resources in a design process through DMIS. The aim is to anticipate strategic actions and to make the project feasible through implementation tactics. This can be more efficient when it is combined at this stage with an EIA as a simulated reality in order to boost the standard of the design in terms of sustainable contextual promises.

10. Executive technical plan (ETP)
The executive technical plan provides details of future practical actions for the project to be implemented. It is the final rendering of the project, which leads to the final actions related to every executive detail. In the case of enquiry-based design, it needs to integrate contextual input in design not as a veneer in a plan, section or elevation, but as a grassroots outcome generated by the different graphical mediums that are currently very advanced.

11. Scheme for implementation (SI)
The scheme for implementation is related to the different ways the ETP is to be implemented on the ground. While the architect may here seem only to be delivering a brief of a design, it is nevertheless about a team-building action that oversees the execution of a holistic design: all stakeholders should be involved in approving the project, allocating required resources and following the construction process so as to realise all the elements of the project’s design (functional, aesthetic, contextual, environmental, cultural, social and economic). The scope of the SI is related to the size of the project, and its post-implementation impact can concern one user, a whole community or a whole city.

12. Project post-mortem analysis (PPMA)
Project post-mortem analysis is seldom carried out, and it is rare for architects even to think of going back to see how their design has performed. Hence the strong criticisms aimed at contemporary designs that focus on how a building will look, while failing to consider what happens after implementation and in use. Indeed, designers are above the law in terms of their creative signature, but they need to be responsible for the consequences of their work and its impact on people’s lives. PPMA is the evaluation of the project’s success in reaching the intended outcomes, and the assessment of the gap between the designer’s ‘conceived’ and the user’s ‘experienced’ realms. The term ‘post-mortem’ signifies literally the examination of a ‘dead body’ so as to detect
the causes of its death. If a building can be metaphorically compared to a body, it is essential then to know how it lives and how it dies if its purpose is not fulfilled. How many buildings fail to last because of weak designs that do not meet human expectations of use? Continuous research based on the post-mortem analysis of buildings and their designs would thus inform architects on how designs show responsiveness in terms of their human, social, cultural and environmental context. Although critics may state that architects are beyond evaluation and that their buildings are works of art, it is crucial to have a programmatic lens in order to decide whether or not they are reliable – as in other industries that succeed or fail according to their human-factor reliability.

The steps listed above may seem beyond the reach of an architect alone, and some may rather concern other involved parties during the implementation of a project; but this comprehensiveness is a necessity, especially in community projects that cannot be confined to aesthetic diagrams. The steps are essential for starting to build momentum around projects where all stakeholders ought to be part of the design process. Thus, for a design to be sound and not fragmented, the architect’s role should be gradually re-established so that the design is conceived with the community on the ground, and not in an ‘ivory tower’ of a distant office, parachuting designs into other regions of the world.
Below
Schematic illustration of the different steps of the process of contextual and sustainable enquiry-based design