

Draft Scope of Services ACE WG SOS	Sta	0	1	2				3	4	5
		Initiative	Initiation	Design				Construction	Building Use	End of Life
				2.1 Conceptual-Design	2.2 Preliminary Design	2.3 Developed Design	2.4 Detailed Design			
Definition		Stage where the need for a construction or urban project emerges and is established (EN 16310 definition)	Stage where project objectives are sufficiently defined to allow a decision for design to proceed.	Sub stage where a set of fundamental thoughts for the project are developed starting at the design work stage taking into account the constraints. (ISO 16813)	Sub stage where a design of the project is developed that offers a broad insight covering planning aspects, functional organisation, spatial structure and general appearance, enabling the client to make informed strategic choices between functional concepts and options envisaged (EN 16310 definition)	Sub stage where the project is specified in such detail, that clear under-standing is given to the stakeholders on the characteristics of the end result and the cost of implementation can be established (EN 16310 definition)	Sub stage where the project is fully described to technical detail, so that construction and that manufacturing and installation of equipment can take place (EN 16310 definition of «technical design»)	Stage where the design is built in accordance with the contract documents, legislation and client requirements (EN 16310 definition)	Stage where the building and external works are in use and maintained for the purpose that they have been designed for.	Stage where the building which is the end of its life-cycle and is revamped or dismantled. (EN 16310 definition)
Tasks										
A	Design and Construction management	<p><b>0.1 Market Study:</b> Appraise future requirements and market conditions for a specific project taking into consideration the interests of society, economic impact of the project and end users' needs.</p> <p><b>0.2 Business Case:</b> Describe the viability of the project, the likelihood of success and project risks, as a basis for decision to go ahead. Estimate and compare overall costs. Set out advantages and disadvantages, such as income generation, the benefit and gains to society and end users against the environmental impact and it's use of resources.</p>	<p><b>1.1 Project Initiation:</b> Evaluate client needs and user requirements. Compile available information covering regulatory, infrastructure and geotechnical conditions. Identify additional site investigations required including surveys of existing buildings and structures. If necessary, carry out measured surveys and condition surveys of existing structures or buildings on site.</p> <p><b>1.2 Feasibility Study:</b> Set out basic planning principles and possible construction strategies. Examine how the project can meet stated requirements and aspirations. Inform the client of technical and statutory constraints the project has to satisfy. Investigate and evaluate expected budget requirements.</p> <p><b>1.3 Definition:</b> Undertake Investigation and determination of client and user requirements and expectations. Set out a project brief, produce a room and function schedule.</p>	<p>Examine the principal elements of the brief, if already defined by the client, or the objectives and requirements the project has to satisfy. Produce concept sketches and undertake preliminary investigations. Prepare CONCEPT design proposals with design options, translating into drawings at an appropriate scale (typically 1:500-1:200) along with a preliminary design report and an initial cost estimate.</p>	<p>Develop the concept design and chosen options as approved by the client and previewed with the authorities. Prepare graphic presentations of the project for discussions with the client and other interested parties. Produce a set of preliminary design drawings at an appropriate scale (typically 1:200-1:100) with floor plans, sections, elevations and 3d modelling. Produce technical reports to explain design options. Provide a cost estimate with possible options and adjustments for inflation.</p>	<p>Develop the approved preliminary design up to an appropriate level, providing the basic information required for issue of contract plans and specifications. Prepare a set of developed design drawings with floor plans, sections and elevations to determine the dimensions, appearance, principal technical solutions, materials and construction elements of the project at an appropriate scale (typically 1:100-1:50). Produce specifications and detailed description of the works in the form of a written document describing the nature of the works and defining the technical specifications for each separate trade. Calculate building costs based on customary prices and if applicable, produce bills of quantities (see below).</p>	<p>Further develop the design to provide execution and detail drawings at the required scale ( typically: 1:50, 1:20, 1:10, 1:5, 1:1). Provide calculations and specifications intended for construction and enabling contractors to build the works. Determine all details including furniture and other elements that are specific to the project. Recalculate building costs based on customary prices and possibly, bills of quantities incorporating quotations from specialist subcontractors. Establish a project execution plan with</p>	<p><b>3.1 Pre-Construction:</b> Prepare contract administration, review contracts and project objectives. <b>3.2 Inspection</b> Oversee the execution of the building contract. Monitor construction progress and compliance with plans. Inspect contractors' activity and execution of the works. Consider contractors' drawings. Undertake random inspection of materials and quality of workmanship. Undertake final clarification of design details prior to implementation. Process changes required by the client and issue relevant instructions to contractors. Check and approve requests for payment issued by contractors. <b>3.3 Commissioning:</b> Check that all works have been carried out in accordance to contract, and that the building is fit for use and compliant to regulations and permits obtained. If necessary, organise statutory procedures required to open the building. Oversee preparation of as-built documentation. <b>3.4 Handover:</b> After final checks for workmanship and compliance with contract documents, Supervise handover to the client and building users as start of guarantee periods. Oversee issue of as-built documentation and final accounts.</p>	<p><b>4.1 Operation:</b> Support the client to maximise the use of his investment. Possibly review of project performance and additional project information as required. <b>4.2 Maintenance:</b> Advise for maintenance of the building and external works for upkeep of the client's investment. Possibly assistance with facility management, training, environmental monitoring, life-cycle strategy and energy-waste-water management procedures.</p>	<p><b>5.1 Revamping:</b> Provide services for a new cycle taking the the built asset through stages from 0. Initiative to 4. New Use. Possibly partial dismantling under controlled conditions if required. <b>5.2 Dismantling:</b> Enable facility shutdown and closing off of the site. Identify services (electricity, gas, fluids ...) in order to make the building safe for decommissioning. Apply for any necessary closure permits. Identify raw materials and waste; select materials to be recycled. Arrange removal and treatment of contaminated materials, removal of contaminated soil and groundwater. If necessary, select appropriate landfill. Inspect dismantling of equipment and service disconnections. Coordinate demolition under controlled conditions to ensure: health and safety of site operatives and the general public. Propose measures to control noise, air and ground water pollution.</p>
B	Sustainability			Propose definition of Sustainability objectives.	Produce preliminary definition of Sustainability Strategy. Environmental impact assessment - verify the general impact of the project on the environment, including building, operating and dismantling.	Develop Sustainability Strategy. Review and update of the environmental impact assessment if necessary.	Review and update Sustainability Strategy.	Monitor application of Sustainability objectives.	Monitor Sustainability performance.	
C	Statutory Approval			Hold preliminary discussions with local authorities on the basis of the conceptual design agreed by the client.	Based on the approved design, produce architectural plans and documentation describing the project to a level of detail as required for Planning or Building permit applications. Collate additional technical documentation from technical specialist consultants; such as; acoustic, thermal, fire safety, environmental and other appraisals as required by applicable legislation. Assemble documents required for building permit applications, draft and submit applications. Represent the client and assistance during planning negotiations and monitor the approvals procedure.					
D	Procurement	Advise with initial considerations for procurement strategy if required	Define possible procurement strategy.	Undertake tender action - convert the project design into a set of pre-contract documents setting out an unambiguous set of tender requirements - collate project documents necessary for contractors to appreciate the type, the quantity, the quality and the scope of their works so that contractors can calculate their best offer. Prepare and issue a tender file to tenderers, including: the conditions of tender, the proposed form of contract, plans, specifications, possibly a bill of quantities and a list of contractual documents with their order of priority, etc. Analyse tender returns, make recommendations to client and assist with conclusion of construction contracts with each respective trade				Apply for additional permits as required, enable possible monitoring by authorities during construction and produce documents to support registration of completion of the works with authorities if necessary.		
E	Programme		Define an expected or desired time schedule, preparation of a project execution plan.	Set out key programme dates. Update and Review of the project execution plan. Devise fundamental schedule in phases. Consider options for Construction Strategy.	Update and Review of the project execution plan. Devise fundamental schedule in phases. Propose Construction Strategy.	Review and update proposed construction schedule and of the project execution plan. Review and update Construction Strategy.	Detail and agree proposed construction schedule. Elaborate Handover and Commissioning Strategy.	Monitor construction schedule as agreed by contract		
F	Health and Safety		Consider of Health and Safety strategy.	Prepare an Outline for Health and Safety Strategy.	Review and update of Health and Safety Strategy.	Review and update of Health and Safety Strategy.	Review and update of Health and Safety Strategy.	Monitor application of Health and Safety Strategy.		
G	Specialist Consultant Design	Advise with initial considerations for assembling the project team	Identify need for specialist consultants. Assemble project team.	Check design from specialist consultants for compliance with the general design and integrate as necessary into overall design documentation. (Specialist design includes technical sub-disciplines of construction such as structural-, mechanical-, electrical-, HVAC-, geotechnical-, fire security-, acoustics-, lighting- etc.)				Monitor input and advice from specialist consultants at construction		
H	Specialist Subcontractor Design					Check design from specialist suppliers and contractors for compliance with the general design and integrate as necessary into overall design documentation. (Specialist contractor's design includes technical design of subcomponents)				
I	Information Exchanges		Define Information exchange objectives	Information exchange level 1. Produce end of stage report for client approval.	Information exchange level 2. Produce end of stage report for client approval.	Information exchange level 3. Produce end of stage report for client approval.	Information exchange 4. Produce end of stage report for client approval.	requests for information from contractors. Compile As-built information.	Update As-built information as required	
J	Notes	Acknowledgements: This matrix scope of services is based on work undertaken by the ACE workgroup of that name. It draws on several national scopes, in particular recent HOAI 2013 from Germany, the HIA from Austria, the RIBA 2013 plan of work and the European standard on Engineering consultancy services EN 16310 published in 2013.								