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Nota di contenuto	Architectural Technology: Research & Practice; Copyright; Contents; About the Contributors; Foreword; Introduction; Chapter One Theory and Architectural Technology; Introduction; Why we need theories; Historical perspectives - learning from the past; The here and now; Looking to the future; Conclusion; References; Case Study A Designing to Anticipate Future Climate Change: The Case of an Urban House; The practitioner's opportunity; The context of environmental ideas; Developing a methodology; The case study; The site context Layering ideas: the Activ-Haus+ concept and contextual design thinkingThe layout and its relationship to context; Passive design approach and initial modelling; Habitable and nonhabitable sunspaces; Modelling of the building; Original IES model; The rerun IES model; Modelling the idea of the variable mass/phase change wall; Zoning and flexible planning; Behaviour; Predicted energy use, insulation levels and airtightness; Actual energy use; Energy and renewables; Appliances, power, daylight and lighting; Control and monitoring systems; Water and sewage

Materials, embodied energy, reuse and recyclingArchitectural and experiential detailing; Making a functional garden; Conclusions; References; Chapter Two The Morphological Construct; Introduction; The appearance of knowledge; The morphological construct; Discussion; Conclusion; References; Case Study B A Sustainable Window: A Process of Development; Introduction; The 9+1 step procedure; Step 1: determining discontinuity of main components; Step 2: determining additional component(s) and functional continuity; Step 3: determining jointing parts and assembly direction Step 4: determining size and position of additional components and jointing partsStep 5: determining preliminary shapes of joint faces; Step 6: determining specific shape of joint faces; Step 7: determining prevention shapes; Step 8: determining correction shapes; Step 9: determining primary and secondary sections of parts; Step 9+1: determining a solution variant; Prototyping; The testing; Mediator (pragmatic); Creator (syntactic); Informator (semantic); The tests; The test results; Evaluation; Conferences; A manufacturer and further specific development; Application in projects Looking back and looking aheadReferences; Chapter Three Sustainable Design Analysis and BIM Integration; Introduction; What is sustainable design analysis?; Commercial realities; True cycle of sustainable design; Sustainable BIM integration; Case Study - SMARTPOD (S - sustainable, M - modular, A - autonomous, R - reusable, T - transportable) building system; Use of the Green Building Studio (GBS); Base run - project results; Design alternatives; Design Alternative 1 - improving the building envelope; Design Alternative 2 - improving the building envelope and lighting control Design Alternative 3 - improving the building envelope, lighting control and HVAC

Sommario/riassunto

... it gives me great pleasure to support the first ever publication to specifically address the area of research, and in particular its relationship with practice, in the discipline of architectural technology... not only ground breaking because it is the first book of its kind, but also because it provides at long last one of the accepted foundations needed to underpin the emerging academic discipline, namely a recognised research base.CIAT, in supporting this publication, is aware of the need for books such as this to sustain the process of research informed practice, as an ai
