1. Record Nr. UNINA9910731412403321

Autore	Arbizzani Eugenio
Titolo	Technological Imagination in the Green and Digital Transition / / edited by Eugenio Arbizzani, Eliana Cangelli, Carola Clemente, Fabrizio Cumo, Francesca Giofrè, Anna Maria Giovenale, Massimo Palme, Spartaco Paris
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2023
ISBN	3-031-29515-3
Edizione	[1st ed. 2023.]
Descrizione fisica	1 online resource (xxxviii, 1037 pages) : illustrations (some color)
Collana	The Urban Book Series, , 2365-7588
Classificazione	ARC018000SCI026000
Disciplina	720.47 696
Soggetti	Sustainable architecture Sustainability Sustainable Architecture/Green Buildings
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	From a liquid society, through technological imagination, to beyond the knowledge society -- Opening lecture: Digital spaces and the material culture -- Part 1: Innovation -- Innovation for the digitization process of the AECO sector -- The digital revolution and the art of co-creation -- Towards a new humanism of technological innovation in design of the built environment -- A bim-based approach to energy analysis of existing buildings in the Italian context -- Short-term wind speed forecasting model using hybrid neural networks and wavelet packet decomposition -- COGNIBUILD: Cognitive digital twin framework for advanced building management and predictive maintenance -- Design of CCHP system with the help of combined chiller system, solar energy, and gas microturbine -- Digital construction and management the public’s infrastructures -- An innovative multi-objective optimization digital workflow for social housing deep energy renovation design process -- Digital information management in thebuilt environment: Data-driven approaches for building process optimization -- Immersive facility management – A methodological approach based on BIM and mixed reality for training and maintenance operations -- A digital information model for coastal maintenance and waterfront

recovery -- Sustainable workplace: Space planning model to optimize environmental impact -- Digital twin models supporting cognitive buildings for ambient assisted living -- Less automation more information: A learning tool for a post-occupancy operation and evaluation -- A prosumer approach for feeding the digital twin. Testing the must application in the old harbor waterfront of Genoa -- Untapping the potential of the digital towards the green imperative: the interdisciplinary BeXLab experience -- Digital-twin for an innovative waterfront management strategy. Pilot project DSH2030 -- BIM and BPMN 2.0 integration for interoperability challenge in construction industry -- Digital twin approach for maintenance management.- Digital infrastructure for student accommodations in european university cities: The “HOME” project -- Part 2: Technology -- Technologies for the construction of buildings and cities of the near future -- The living lab for autonomous driving as applied research of MaaS models in the smart city: the case study of MASA – Modena Automotive Smart Area -- Expanding the wave of smartness: Smart buildings, another frontier of the digital revolution -- Sharing innovation. The acceptability of off-site industrialized systems for housing -- 3D printing for housing. Recurring architectural themes -- Photovoltaic breakthrough in architecture: Integration and innovation best practice -- Reworking studio design education driven by 3D printing technologies -- The new technological paradigm in the post-digital era. Three convergent paths between creative action and computational tools -- Technological innovation for circularity and sustainability through buildings’ life cycles: Policy, initiatives and stakeholders’ perspective -- Fair play: Why reliable data for low tech construction and non-conventional materials are needed -- Part 3: Environment -- Technological innovation for the next ecosystem transition: From a high tech -- To low tech intensity – High efficiency environment -- Technological imagination to stay within planetary boundaries -- Quality-based design for environmentally conscious architecture -- Digital transformation projects for the future digicircular society -- The regulatory apparatus at the service of sustainable planning of the built environment: The case of law 338/2000 -- From nature to architecture for low tech solutions: Biomimetic principles for climate-adaptive building envelope -- Soft technologies for the circular transition: Practical experimentation of the product “material passport” -- Imaging a carbon neutral university -- Life cycle assessment at the early stage of building design -- Design scenarios for a circular vision of post-disaster temporary settlements -- Towards climate neutrality: Progressing key actions for positive energy districts implementation -- Remanufacturing towards circularity in the construction sector: The role of digital technologies -- Territorial energy potential for energy community and climate mitigation actions: Experimentation on pilot cases in Rome -- Integrated design approach to build a safe and sustainable dual intended use center in Praslin island, Seychelles -- Part 4: Climate changes -- Climate change: New ways to inhabit the earth -- The climate report. Informing the response to climate change in urban development -- The urban riverfront greenway: A linear attractor for sustainable urban development -- The buildings reuse for a music district aimed at a sustainable urban development -- Environmental design for a sustainable district & civic hub -- Earth observation technologies for mitigating urban climate changes -- A systematic catalogue of design solutions for the regeneration of urban environment contrasting the climate change impact -- Digital twins for climate-neutral and resilient cities. State of the art and future development as tools to support urban decision

making -- The urban potential of multifamily housing renovation.-A “stepping stone” approach to exploiting urban density -- Metropolitan farms: Long term agri-food systems for sustainable urban landscapes -- Resilient design for outdoor sports infrastructure -- Sustainable reuse indicators for ecclesiastic built heritage regeneration -- A green technological rehabilitation of the built environment. From public residential estates to eco-districts -- Adaptive building technologies for building envelopes under climate change conditions -- The importance of testing activities for a "new" generation of building envelope -- Data visualization and web-based mapping for SGDs and adaptation to climate change in the urban environment -- Fog water harvesting through smart façade for a climate resilient built environment -- Building façade retrofit: A comparison between current methodologies and innovative membranes strategies for overcoming the existing retrofit constraints -- Technologies and solutions for collaborative processes in mutating cities -- New perspectives for the building heritage in depopulated areas: A methodological approach for evaluating sustainable reuse and upcycling strategies -- Climate adaptation in urban regeneration: A cross-scale digital design workflow -- Adaptive “velari” -- Temporary climate change adaptation: 5 measures for outdoor spaces of the mid-adriatic city -- Serious game: New tools for exploring and designing urban sustainability -- Energy efficiency improvement in industrial brownfield heritage buildings: Case study of “Beko” -- Industrial heritage of Belgrade: Brownfield sites revitalization status, potentials and opportunities missed -- Challenges and potentials of green roof retrofit: A case study -- Designing with nature climate-resilient cities: A lesson from Copenhagen -- New urban centralities universities as a paradigm for a sustainable city -- Part 5: Health -- Environment for healthy living -- New paradigms for indoor healthy living -- Healthy and empowering life in schoolyards. The case of Dante Alighieri school in Milan -- Design for emergency: Inclusive housing solution -- Environmental sensing and simulations for healthy districts: A comparison between field measurements and CFD model -- A synthesis paradigm as a way of bringing back to life the artistic monuments inspired by the motives of the people’s liberation struggle and revolution of Yugoslavia -- Social sustainability and inclusive environments in neighborhood sustainability assessment tools -- Inclusive neighborhoods in a healthy city: Walkability assessment and guidance in Rome -- Tools and strategies for health promotion in urban context: Technology and innovation for enhancing parish ecclesiastical heritage through sport and inclusion -- Nursing homes during Covid-19 pandemic - A systematic literature review for Covid-19 proof architecture design strategies -- A new generation of territorial healthcare infrastructures after Covid-19. The transition to community homes and community hospitals into the framework of the Italian recovery plan -- Wood Snoezelen. Multisensory wooden environments for the care and rehabilitation of people with severe and very severe cognitive disabilities -- The proximity of urban green spaces as urban health strategy to promote active, inclusive and salutogenic cities -- Environmental attributes for healthcare professional’s well-being.

Sommario/riassunto

This open access book addresses the pressing need for sustainability in urban development and the use of technology, with cities to serve as the main stage for strategies that seek to meet the targets and the cross-sector priorities indicated in the EU’s Next Generation program, all in pursuit of a solid recovery on the part of the European economy, along lines of ecological transition, digitalization, competitiveness, training, and inclusion to overcome social, territorial, and gender

differences. The international study encounter is meant to promote visions shared by architectural technology and other disciplines, which, though they may appear to differ, are closely interconnected, with the aim of achieving an open, interdisciplinary integration capable of proposing concrete projects regarding topics held to be of strategic importance to the future of the built environment. These are identified to draw up evolving scenarios of architecture and cities suited to reflection, at various levels, on innovative models of process and product.