

Lecture Notes in Civil Engineering

Alexander Ginzburg
Kashevarova Galina *Editors*

Building Life-cycle Management. Information Systems and Technologies

Selected Papers

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Building Life-cycle Management. Information Systems and Technologies

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Preface

The proceedings of the International Conference “Building life-cycle management. Information systems and technologies” submitted for publication are focused on the critical issues of managing capital development projects on the base of information modelling technologies. Nowadays, worldwide the specialists in the sphere of automation and informatization of construction industry are likely to address the issues related to formation and filling the information models at various stages of project’s life cycles, to the content of the issues solved on the base of these models, and to technical and organizational interaction of all participants of investment construction process.

In the papers included into the proceedings, the specialists representing more than 10 countries are dealing with the most relevant issues in the following areas:

- Theoretical, methodological and integrating approaches to management of capital development projects life cycles;
- Managing the information models data capital development projects at all the stages of their life cycle, including collection, storing, integration and transfer of data, their monitoring, actualization and analysis, validation and verification;
- Modelling information processes and structures, algorithms of visualization, transformation and analysis of information, synthesis of virtual and augmented reality;
- Creation and development of issue-driven management systems on the base of digital intellectual support for effective decision-making, fuzzy modelling, optimization of capital development projects functioning at all stages of their life cycle;
- Designing organizational structure of enterprises, organizing manufacturing processes and system of their management;
- Information modelling of building systems aimed at the effective management of capital development projects and their complexes at all stages of their life cycle;
- Design management and planning of production processes, including those under conditions of uncertainty and risks;

- Methods and algorithms of managing organizational and information processes in construction;
- Technical rationing and regulation of organization, management and information modelling processes for capital development projects and building systems at all stages of their life cycle.

The International Conference “Building life-cycle management. Information systems and technologies” was dedicated to the 50th anniversary of the Department “Information systems, technologies and automation in construction”, the leading department of the National Research Moscow State University of Civil Engineering (NRU MGSU), that is specialized in teaching and conducting scientific research in the sphere of information modelling technologies, automation of management and design in construction industry. Enhanced collaboration of the department with the leading Russian and foreign scientists enabled to compile the current proceedings that provides a picture of the contemporary state of scientific and practical approaches to life-cycle management of construction projects.

I strongly believe that the current proceedings will be of great interest for both scientists and practitioners, as well as for undergraduate and postgraduate students who are knowledgeable about the issues of applying information technologies in construction.

Moscow, Russia

Alexander Ginzburg

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