



Community development – Brest, Belarus

ISOVER MULTI-COMFORT HOUSE STUDENTS CONTEST

12th International Stage – Minsk 2016



Minsk, Belarus

May 25-27 2016

Willkommen!
Сардэчна запрашаем!
Добре дошли!
Dobro došli!
Vítame Vás!
Tere tulemast!
Tervetuloa!
Кош келдініздер!
Добро пожаловать!
Ласкаво просимо!
Hoşgeldiniz!

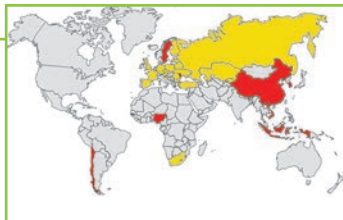
Laipni lūgti!
Sveiki atvykę!
Bine ati venit!
Vítáme vás!
Dobrodošli!
Bienvenido!
Bienvenue!
Welkom!
Welcome!
Witamy!

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Introduction



Participating countries to final stage of ISOVER Multi Comfort House Students Contest Edition 2016.

HISTORY

During 3 days, between 25th and 28th May, Saint-Gobain ISOVER organized with the support of Brest Executive Committee, French Embassy in Belarus and Belarussian National Aircarrier - Belavia, the 12th International Edition of ISOVER Multi Comfort House Students Contest in Minsk, Belarus. Over 170 persons, students, teachers and other guests attended this year International Edition, which was also sponsored by two local partners of Saint-Gobain, companies: Stroyfutura and Stroypartner. Participants came from architectural and engineering universities from: Austria, Belarus, Belgium, Bulgaria, Croatia, Czech Republic, Estonia, Finland, France, Germany, Kazakhstan, Kirghizstan, Latvia, Poland, Romania, Russia, Slovakia, Slovenia, Spain, South Africa, Turkey, UK and Ukraine. The contest, held for the first time at international level in Bulgaria in 2005, aims at better disseminating the ideas of energy efficiency as well as the different comfort dimensions among these future opinion leaders and it is based on Saint-Gobain Multi Comfort Concept.

The competition is structured in 2 stages: national stages followed by an international one where the best projects from each country compete.

For 2016 edition, over 1600 students from more than 100 universities registered for the participation to the national stages.

ASSIGNMENT

This year edition task, developed by Saint-Gobain ISOVER in close cooperation with Brest Executive Committee, required participants to design an energy efficient module with residential function located in the “Krasny Dvor” perimeter of Brest, Belarus.

The participants had to create sustainable architecture that responded to the specific needs of Brest Municipality. Their project had to integrate into the given site while respecting the Saint-Gobain Multi Comfort criteria and take into account the local climatic conditions.



FINAL STAGE

The contest started with the opening of the projects exhibition during which the participants had the chance to see the entire project participating to this year event.



Mr. Mikalai Ulasiuk
Chief Architect, Brest Executive Committee

For the members of the jury:

- Mr. Mikalai Ulasiuk – Chief Architect, Brest Executive Committee
- Ms. Galina Polyanskaya – Chairwoman of the Standing Commission for Housing Policy, Construction, Trade and Privatization, House of Representatives, Belarus
- Mr. Roland Matzig – Architect, RMP Architects Germany
- Mr. Telman Tyshkanbayev – Architect, Sroy-Logistic Kazakhstan
- Mr. Slawomir Szpunar – International Marketing Director, Saint-Gobain France
- Mr. Leif Andersson – International Manager Innovation & Solutions, Saint-Gobain Insulation France
- Mr. Vladimir Hain – Architect, Former winner of Students Contest Edition 2009



Participants in the ISOVER Multi-Comfort House
Students Contest 2016 International Stage

International Winners 2016

During the second day the participants went to the National Library of Belarus where the projects presentation was held. Each of the 54 student teams, from 23 countries and representing more than 30 different nationalities, had the opportunity to present their concept design and ideas to the jury and other participants as well as to friends and colleagues that were watching them online, as the event was live webcasted.



INTERNATIONAL WINNERS 2016

- **1ST PRIZE:** RADOSLAV TODOROV, ROSEN YORDANOV, BOGDAN RADICHEV from University of Architecture, Civil Engineering and Geodesy, Bulgaria
- **2ND PRIZE:** MIGUEL CARVALHO, JAMES RUSSWURM, TIAGO VASCONCELOS from Johannesburg University, South Africa
- **3RD PRIZE:** ANDREEA MOVILA, AMALIA VACARU from Gh. Asachi, Iasi, Romania

Special prizes:

- DANIIL CHARATOVICH, ALIAKSANDR JANATAN KARPITSKI, DAVID TSYBIKAU from BSTU, Belarus
- ANTTI TUURE from Tampere University, Finland
- AYCA YAZICI, FERHAT BULDUKK from Istanbul Technical University and Yildiz Technical University, Turkey
- VALERIA ARTENII, ANDREI TINTARI from Ion Mincu, Bucharest, Romania



Students Radoslav Todorov, Rosen Yordanov, Bogdan Radichev from University of Architecture, Civil Engineering and Geodesy, Bulgaria - winners of the first Prize at the 12th International Edition of ISOVER Multi Comfort House Students Contest

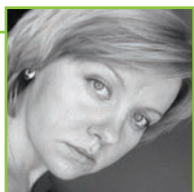
Professors



PROFESSOR ARCH. ANNA LITVINOVA

■ Belarus

Architect, designer and a leading expert in the field of architectural design and coloring, design of color and their study in architectural school. Head of the department “Design of architectural environment” at Belarusian National Technical University since 2002, Associate Professor. In 1980, graduated from the Dnepropetrovsk Civil Engineering Institute in speciality “Architecture,” in 1992 - postgraduate studies (by correspondence) at the Belarusian State Polytechnic Academy. Since 1986 - Member of the USSR Union of Architects, the Belarusian Union of Architects. Full member of the AAU MOOSAO of the Republic of Belarus. Winner of the Special Prize of the President of the Republic of Belarus in the field of criticism and art history in 2003, Vth BSA National Festival of Architecture, International Science Project Competition and Exhibition mode on-line “Artistic Design Culture In the Era of Information Technologies”, Russia, 2008. For creative achievements in the training of future architects awarded diplomas of the Belarusian Union of Architects and the Belarusian Union of Designers. The head of 30 graduation diploma projects (starting with 1998) marked by I and II degrees certificates in international and national contest of the best graduation projects (2 Grand Prix of the Republican contests.) Co-author of a textbook, “Architectural coloring”(two books), author over 50 scientific publications in domestic and foreign editions. The participant of republican and international conferences, symposiums, congresses and exhibitions. Jury member of international and national competitions in the field of architecture and design. Author and coauthor of over 50 completed and implemented significant works of architecture and design (Belarus, Russia, Ukraine, Crimea, Armenia, Lithuania).



ARCH. TATIANA PANCHENKO

■ Belarus

An architect, the head of architectural project and drawing department of the Brest State Technical University since 2010. In 1997 graduated from the Belarusian National Technical University, speciality “Architecture”. In 2005, the post-graduate course (correspondence department) of the Belarusian National Technical University. Starting with 1999 the manager of more than 20 diploma projects, awarded with certificates of I and II degrees al the republic competitions of the best diploma projects. The author of more than 40 scientific publications in nativ and foreign editions. The member of republic and international conferences, symposiums, congresses and exhibitions. The jury member of international, republic competitions in the field of architecture and design.

ARCHITECT-URBANIST DANNY WINDMOLDERS

■ Belgium

Danny Windmolders is docent at the UHasselt (B), Department of Architecture and Art, where he graduated with Master Degree from Architecture in 1982. In 1999 he graduated with Master Degree from Urbanism at the Luca School of Arts Brussels (B). He is manager of Architectenbureau FCS (www.fcs.be), an architecture office where he started working in 1982.

Since 1989 he has been an Academic teacher at the UHasselt.

He has also always been engaged in organizations that promote the improvement in the profession of architecture and that want to increase public awareness of the nature of architecture and its essential contribution to life and society. So he has been chairman of the 'Orde van Architecten Limburg' and chairman of the 'Nationaal Architecten Verbond'.



AS. ARCH. ANDREI VELINOV

■ Bulgaria

Arch. Velinov has graduated master's degree in architecture at the UACG in 2003.

2001: Best student project for multifamily apartment building.

2002: 1st place - Competition prefabricated single-family house "Knauf" Ltd.

2003: Best decor magazine "Ideal Home" .

2004: 1st place - Competition for manufacturing complex, showroom and hotel on the "Liberty Foods" Ltd.

2007: 1st place - International Competition for multifunctional complex with tall buildings "Delta Towers" - "Delta Real Estate" Ltd.

2009: preemption - Competition for a residential complex with public services in the district. "Boyana" city. Sofia: S.R.E. Bulgaria.

2011: 1st place (for Bulgaria) - Competition for buildings made of ceramic fixtures - Wienerberger.

2013: 1st place - Competition for the renovation of the Hotel Rila - Borovets - organizer T Trust Engineering.

Since 2014 it is part of the leadership of VISTA POINT, five years in the team of City Design Development, which deals with interior design. Arch. Velinov taught in the faculty of architecture of VSU "Lyuben Karavelov", Sofia, 2008.



AS. ARCH. VASIL KASHUKEEV

■ Bulgaria

Arch. Vasil Kashukeev graduated from the University of Architecture, Civil Engineering and Geodesy (UACG) in 1990. Since 1994, he teaches at the Department of "Public Buildings" of the University and worked in the studio of arch. Popov.

Arch. Vasil Kashukeev became winner of the title Architect of the Year 2008. For the realization of the project "Rainbow Plaza" in Sofia he received the highest award in the competition of "Arch and Art Forum", which is awarded for outstanding artistic achievements and raising the prestige of the architect.





AS. ARCH. YORDAN LIKOV

■ Bulgaria

Born in 1958. Leading architect, lecturer at the University of Architecture, Civil Engineering and Geodesy - Sofia. He has a long practice and extensive experience in the design and organization of design activities.



ALENKA DELIĆ

■ Croatia

In 1985. began her studies at the Faculty of Architecture, University of Zagreb, where she graduated in 1991. Since 1992. employed at the Faculty of Architecture of the University of Zagreb, as a research assistant. Got her PhD in 2000. with the thesis "Computer graphics in architecture".

Her scientific, academic and professional interests are related to residential architecture. She teaches several Architectural design courses at Department of Architectural Design, Department for Housing. Together with academic Branko Kincl established new elective course Virtuality in residential architecture. 2008. she became holder of lecture Contemporary Housing, and from 2012. the holder of the Introduction to the design of residential buildings. Through academic work with the students, new concepts of housing are being explored, in which flexibility, ecology (sustainable development) and virtuality play a crucial role, demonstrating a new way of thinking about urban living, and offering a new way of life for the start of the 21st century. In that sense, flexibility, adaptability and variability are the first and necessary step in creating adequate housing space together with participation of apartment users.

Parallel to teaching she is publishing scientific articles, participated in domestic and international symposiums. She won national and international awards in the field of computer graphics in architecture. After graduation she worked intensively on professional jobs and urban architectural competitions. Since 2007. conduct the Vice-Dean position for Academic Affairs, Faculty of Architecture of the University of Zagreb.



ENG. ARCH. JOSEF SMOLA

■ Czech Republic

1958, architect, publicist and teacher at Czech Technical University in Prague, Faculty of Civil Engineering, also member at Center of passive houses in Czech Republic.

ENG. ARCH. LADISLAV KALIVODA

■ Czech Republic

Born in 1949. In 1974 Graduated CVUT - Czech technical University in Prague and became chartered architect at the Czech Chamber of Architects. He started his teaching career in 1975 as assistant in Faculty of Civil Engineering at CVUT. He was designer at project atelier in (1977 - 1978) and later a head of atelier SSDS (1991-1992) and ateliers Stavmont Ltd and Stavba 15 Ltd (since 1992). Starting from 2004 ing. Kalivoda is a part time lecturer at CVUT - Faculty of Civil Engineering.



ZUZANA PEŠKOVÁ

■ Czech Republic

* May 1, 1980

A graduate of the Faculty of Civil Engineering Czech Technical University in Prague, where she works as an associate professor in the Department of Architecture, is in charge of study program Architecture and Building Structures. She is teaching and publishing, has its own design practice. The main subject of interest in the rural-urban planning, especially the way the establishment and assessment of villages.



EMIL URBEL

■ Estonia

1959: born in Pärnu, Estonia 1982 graduated as architect, Estonian Academy of Arts
2000: member of Union of Estonian Architects (UEA) 1982 State Design Institute "Eesti Tööstusprojekt" (Estonian Industrial Project) 1984-1989 State Design Institute "Eesti Projekt" (Estonian Project)
1989-2000: Architects Urbel ja Peil OÜ 2000 - Emil Urbel Architects OÜ
1995-2000: teaching at Estonian Academy of Arts, Dept. of Interior architecture
2000-2005: teaching at Tallinn Technical College, Dept. of Architecture
2012: teaching at Tallinn University of Technology, Faculty of Civil Engineering, Department Of Structural Design
Awards 1990 award of UEA „Best young architect“ 1996, 2000, 2003, 2012 awards of Estonian Cultural Endowment for the best building. Several awards and nominations in architectural competitions.





LECTURER JAAN KUUSEMETS

■ Estonia

He was born in 1979 in Kärkla, Estonia. From 2002 - marine engineering, Estonian Maritime Academy. 2010 graduated as architect, Tallinn University of Applied Sciences. 2012 graduated as architect, (M. Sc A.) Brandenburg University of Technology. 2012 - member of Union of Estonian Architects (UEA). From 2002 to 2014 he worked at AB DAGOpen OÜ. 2011 - teaching at Tallinn University of Applied Sciences, Dept. of Architecture. 2014 - teaching at Tallinn University of Technology, Faculty of Civil Engineering, Department Of Structural Design. He has several awards and nominations in architectural competitions.



JANNE PIHLAJANIEMI

■ Finland

Janne Pihlajaniemi is a professor of architecture in the Oulu School of Architecture, University of Oulu. His current research topics include Economics of Architecture and Modern Log City. Pihlajaniemi received his Master's degree in architecture in 1998 and Doctoral degree in 2014 from University of Oulu. He has been awarded in 30 different national or international architectural competitions. Janne Pihlajaniemi is a partner of M3 Architects together with Kari Nykänen and Henrika Pihlajaniemi. The office works in the fields of urban planning and design, building design, housing and lighting design. Their buildings and projects have been published in various national and international publications.



LECTURER PETRI AARNIO

■ Finland

Graduated from Department of Architecture at University of Oulu 1994. Member of the Finnish Association of Architects since 1995. Worked in architecture offices 1984-2003 focusing on public buildings, apartment buildings and wooden buildings. Teaching architecture at the university of Oulu in the department of architecture in the laboratory of architectural construction since 2003. The main aspects in teaching: wooden structures, detailing of structures, sustainability, energy efficiency, planning of flats. Member of the management team of the architecture department of the university of Oulu. The Good Teacher Award of Oulu university 2010.

MARKKU HEDMAN

■ Finland

Markku Hedman is a professor of housing design in the School of Architecture, Tampere University of Technology (TUT). Hedman is also the director of ASUTUT research group which is focused on housing design. The main themes of the research are resident-orientedness, the new solutions of urban living and sustainability in housing.

Hedman received his master's degree in architecture from Helsinki University of Technology (HUT) in 1996. Since 1997 Hedman has been running an architectural office and been in charge of a variety of design tasks from large scale urban planning to furniture design projects. Hedman has been awarded a prize in 13 national or international architectural competitions. His work has been exhibited in several international magazines and books as well as in exhibitions.

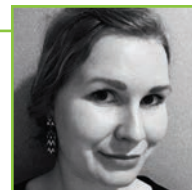


TARU LINDBERG

■ Finland

Taru Lindberg is an architect, researcher and teacher of housing design in the School of Architecture, Tampere University of Technology (TUT). Lindberg is a member of ASUTUT researcher group, and the main focuses of the research are energy efficiency, carbon footprint and sustainability in housing.

Lindberg received her master's degree in architecture in 2015 from Tampere University of Technology. She has working experience in architectural planning, BIM modeling and co-operation development with construction companies. Lindberg's master's thesis work has gained national attention and awards in the field of architecture, construction and green development.



MARC BENARD

■ France

Born in Paris in 1973.

Graduated from the Ecole d'Architecture Paris Villemin. Creating Equateur SAS d'architecture in 1999. (www.equateur-architecture.fr). Freelance Journalist on environmental issues for the monthly architecture magazine AMC Le Moniteur from 2007 to 2010.

Since 2006 teacher at the architecture school ENSA Paris Malaquais





SANDRA PLANCHEZ

■ France

Sandra Planchez, diplomat architect and planner graduated from IEP (Institute of Political Studies in Paris). Since 2004 is teaching Theory and Practice of Architectural at the and Urban Project in ENSA PARIS MALAQUAIS.

Since 2001 she is partner at Cantin Plancez Architecture realizing design and construction of architectural projects, housing, facilities, offices urban studies, public and private sector, villas, interior architecture.

In 2013 launched www.splaar.com an entity wishing to combine experimental approach and finally pragmatism.



LUDWIG RONGEN

■ Germany

Ludwig Rongen studied architecture at the University of Applied Sciences Aachen with focus on town planning and at Technical University of Aachen with focus on architecture. He then became a project manager at town planning Düsseldorf before founding his own RONGEN ARCHITECTS office.

Since 1992 Ludwig is a professor at the faculty of architecture at the University of Applied Sciences, FH Erfurt where he developed the consecutive master course "Passive House +". He also assembled cooperation between university of applied sciences, FH Erfurt and Southwest Jiaotong University Chengdu, V. R. China where he had been working as a visiting professor.

His main competence is the energy-efficient building construction of old and new buildings. Ludwig has completed many 'passive'houses, including the first senior residence at 'passive'house standard. He has published many publications concerning energy-efficient buildings. He has also been involved in various DBU-projects (German foundation for the environment), as for example the inspection of all communal buildings of the city of Basesweiler to optimize their energy consumption.



ELENA ALEXANDROVNA FEOKTISTOVA

■ Kazakhstan

1990-1996 - Ust-Kamenogorsk building-road institute, specialty "Architecture", architect.

2007-2010 - Novosibirsk State Academy of Architecture and Art, Novosibirsk, specialty "Theory and history of architecture, restoration and reconstruction of historical and architectural heritage", 2011 - The defense in the Dissertation Council of the Ural Academy of Architecture and Arts and approval by the WAC Russian scientific degree of candidate of architecture.

OXANA PRIYEMETS

■ Kazakhstan

Born in 1973 in Bryansk region, Russian Federation. She graduated from the University of Almaty, Faculty of Architecture, Kazakhstan, in 1996. Since 1988 she has been working as an Assistant Professor of the Architecture Faculty. Since 2008, she has been taken up a post of an Assistant of Dean on international communications and external relations. The main direction in teaching is on the base disciplines (architectural graphic, bread boarding, composition). In 2015 she defended the candidate dissertation. She attended the international architectural seminars, writes scientific and professional articles. Works of her students participated in the domestic and international competitions and exhibitions, where they took the winner places. She also takes part in architectural and research projects.



PROFESSOR ULANBEK ISKENDEROV

■ Kyrgyzstan

Ulanbek Iskenderov was born in 1986. Specialty: architect and town-planner. I studied at the university Kyrgyz state university building, transport and architecture. Faculty Architecture and design in 2004-2010. In the department town-planner and architecture. I graduate from the university with honors. Theme of degree work: «Memorial complex of Cnyngyz Aitmatov on coasts of Lake Issyk-Kul, village near Bosteri». I have arrived in postgraduate study on department “Architecture”. The master’s theme: «Modern methods of town-planning forecasting on an example of the Central Asia and the Kyrgyz Republic» in 2010. And since 2011 I am engaged in research, the analysis of cities, working out of concepts and methods. And as from this year I am working on department “Architecture”. Participated about 30 international, republican, regional architecturally-town-planning, welfare competitions, conferences and forums. The winner is more 10 architecturally-town-planning competitions. The owner of youth award of Cnyngyz Aitmatov, is awarded by «the gold diploma» the Ministry of a youth policy of the Kyrgyz Republic.



EDGARS BONDARS

■ Latvia

Architect, born in 1983, Professional degree of Architect (2007), Master of Architecture (2009), Doctor of Architecture (2013), Riga Technical University. Doctoral thesis: „Design of Spatial Environment in the Context of Bioclimatic Factors”. Research fields: principles of implementation of the idea of sustainable development in architecture, bioclimatic designing. Author of several scientific publications in national and international issues. Lecturer in the Department of Architecture and Urban Planning at the Riga Technical University. Architect and member of the board of the architectural design company RR.ES, LTD.





PROFESSOR ING. ARCH. LECTURER ANDRZEJ DUDA

■ Poland

Andrzej Duda, born in 1953, graduated from Silesian University of Technology in Gliwice (1973-79), post graduate studies in The Berlage Institute of Amsterdam (1991-92), established architectural office INARKO (together with H. Zubel) in 1988. Winner of about 40 architectural competitions, Honoured with many awards for his architectural works. Since 1980 a teacher at the Architectural Department of Silesian University of Technology in Gliwice and a guest professor at Warsaw University of Technology, Wrocław University of Technology, Prague University of Technology and Tbilisi Art Academy. Since 2002 an independent expert of European Union Prize for Contemporary Architecture Mies van der Rohe Award.



ARCH. RADU ANDREI

■ Romania

Radu Andrei is Lecturer at "G.M. Cantacuzino" Faculty of Architecture, Technical University in Iasi. He teaches architectural rehabilitation, heritage preservation and restoration. His publications and research interests are in the fields of industrial heritage conservation and conversion, ecological architecture as well as architectural theory and phenomenology.



LECTURER SERGIU CĂTĂLIN PETREA

■ Romania

Sergiu Cătălin Petrea is Lecturer at Faculty of Architecture - Basics of Architectural Design Department from "Ion Mincu" University of Architecture and Urbanism. Starting with 2012 he has also a course of Ecology and Technology in Contemporary Architecture at UAUIM. He has attended Advanced Design Methods Master Program in 2005 and has a PHD Degree in architecture on Emergency Architecture in 2011. He currently explores the perspectives of sustainable architectural design and energy efficient planning, being also concerned about themes related to poverty, experiment and urban regeneration strategies. His architectural practice includes buildings from all the fields of expertise, interior and graphic design and architectural contests. He constantly participates in international congresses and conferences and it is also involved in research projects. Many of his architectural research themes are reflected in scientific papers and various thematic studies published in specialized media.

PHD. ARCH., PROF. TATIANA VAVILOVA

■ Russia

In 1973 she began her studies in Samara (Kuybyshev), at the Faculty of Architecture in State University of Architecture and Civil Engineering (SSUASE). Then Tatiana Vavilova continued the study in Moscow Architectural Institute (MARCHI) and graduated it in 1980.

Since 1980 she is teacher at SSUASE. Many years Tatiana Vavilova works in Architecture of Residential and Public Buildings Department. She carries out preparation of bachelors, masters and PhD students.

Lecturer in special courses «Architectural ecology», «Social and ecological problems of town-planning» and «Architecture on a context of sustainable development». The head of diploma projects and the lead consultant in environmental design. Starting from 1990, more than 40 course and diploma projects received awards at the international and national contests.

Tatiana Vavilova graduated from the postgraduate course at MARCHI. Doctoral thesis «Urban-planning regulation of the industrial-residential territories in Metropolitan areas» (1997). Author over 120 scientific publications in russian and international editions. The participant of the national and international conferences, symposiums, congresses and exhibitions. The sphere of scientific interests is different architectural methods of ecologization and humanization of living environment.



KUTYREV VALERII

■ Russia

- 1973 - 1977, graduated from Volgograd State University of Architecture and Civil Engineering (VSUACE)
- 1978-1980. The head architect of Penza architectural department
- 1980-1996. The main architect of Lenin district in Penza city.
- 1996-2011. The project chief architect of architectural and engineering team
- 2011-present time. Senior teacher of Penza State University of Architecture and Construction.





JARMILA HÚSENICOVÁ

■ Slovakia

Jarmila Husenicova was born in 1953 in Zvolen. She graduated in 1977 at Faculty of Architecture, Slovak University of Technology (STU) in Bratislava. Professional experience record: 1977-1993 – urban design and territorial planning practice and Czecho-Slovak and international research activities – URBION – State Institute for Town and Country Planning in Bratislava). 1992-2006 designer of numerous master plans and applied research fellow with emphasis on territorial development - private entrepreneur activities – EKOPOLIS I. (EKOPOL). Since 1994 lecturer at University of Zilina, Faculty of Civil Engineering, Dpt. of Construction and Town and Country Planning till 2000. Expert in territorial development e.g. town and country planning, regional policy, architecture, architecture monuments, environment (especially nature protection). The concept of Territorial systems supporting the ecological stability of the country (Green Infrastructure nowadays) was formed in Czechoslovakia in the 80-s of 20th century. Under the leadership of Jarmila Husenicova General Supraregional Territorial System of Ecological Stability of the Slovak Republic - has been drawn up in URBION (i. e. State Institute of Town and Country Planning) in Bratislava within the wide interdisciplinary partner-team of experts from Brno to Kosice in 1991. GNUSES - approved by Slovak Government Resolution No. 319 - 27.04.1992 is published in the Landscape Atlas of Slovak Republic (Esprit company – Ministry of Environment of Slovak Republic 2 000). In her applied research, she is mainly focused on issues of Green Infrastructure and Towns Harmonization Process in Slovakia and EU countries. Since 2001 she is Assoc. Prof. at Department of Architecture, Faculty of Civil Engineering, Slovak University of Technology (STU) Bratislava, Slovak Republic – lecturer of Town and Country Planning, applied research Project: AGENDA 21 - Sustainable countryside development belongs to European Union Initiative INTER-REG III A Austria - Slovak Republic 2007 – 2008. Currently she is Head of Department of Architecture, Faculty of Civil Engineering, STU. Membership of professional bodies: Slovak Chamber of Architects, Bratislava.



DOC. ING. ARCH. HENRICH PIFKO

■ Slovakia

Born in 1959, he is currently teaching at the Faculty of Architecture of the Slovak University of Technology in Bratislava, at the Institute of Ecological and Experimental Architecture where he is the sponsor of the educational module “Architecture and Environment”. In addition to teaching he is authorized architect (SKA), specialized in green architecture and passive houses (he is Certified Passive House Designer). He is chairman of the Institute for Passive Houses (iEPD) and founding member of ArTUR (Architecture for Sustainable Development) NGO. He participated in international research projects (e.g. EcoCity, Oikodemos), and he is author of a number of publications and co-author of the books “Effective Housing” and “Handbook of Sustainable Architecture”.

ASSOC. PROF. , PHD. MARTINA ZBAŠNIK-SENEGAČNIK

■ Slovenia

Was born in Ljubljana. She graduated at the University of Ljubljana, Faculty of Architecture, Slovenia, in 1986. She received a Master Degree in 1992 and in 1996 a Ph.D. degree (Negative influences of building materials on the environment and human beings). Since 1988 she has been working at the faculty, first as a teaching assistant, in the year 2000 she became an assistant professor and in 2009 an associate professor. She teaches the subjects Ecological building principles, Technology of building and building materials and Design studio. Her main working focus is the field of energy efficiency (passive houses, low-energy houses, energy-efficient building technologies), ecological use of building materials, natural materials, sustainable architecture, contemporary materials for facades, building technologies.

She was the research programme leader at Faculty of Architecture (Sustainable planning for the quality living space) in 2009-2011. She is the author of two monographs: Fasadni ovoj (Façade) (co-author) and Pasivna hiša (Passive house) (both Slovene language) and numeral articles in scientific and professional magazines in Slovenia and abroad. The monograph Passive House was also published in Croatian and Bulgarian language.

She is a member of the Council for the efficient use of energy by Ministry of the environment and spatial planning, member of Photovoltaic technology platform – working group Integration of solar power stations in the building. Her reference is also the organization and leadership of professional seminars for the architects since 2004 (the topics: energy efficiency, passive houses, building technologies). She is a founder and a leader of Passive House Consortium since 2008.



KEN STUCKE

■ South Africa

Mr Ken Stucke, Born in South Africa, grew up in Malaysia, England and France, graduated from Wits University with Bachelor's degree in Architecture, currently is a Senior Lecturer in the subjects of Design, Construction, and Building Performance at The University of Johannesburg's School of Architecture. Ken is also the sole director of Environment Response Architecture. ERA Architects is an experienced and award winning architectural practice providing specialised expertise on architectural projects with an environmental agenda, green architecture and sustainable development. Ken has also worked hands on as a contractor in various countries, ranging from France and England to Botswana and South Africa. This length and breadth of experience has provided him with a firm grasp of the environmental and technological issues at work in the construction industry.





PPROFESSOR ENRIQUE ANELO

■ Spain

Born in La Coruña in 1973, he graduated from the Faculty of Architecture at the University of La Coruña where he is associate professor of the Department of Architectural Constructions. In addition to his academic activities, he is one of the founders of VIER arquitectos, an architecture and design office located in La Coruña. His work has been showed in many publications and exhibitions. He has given lectures at several forums, both in Spain and abroad and received several awards among which are the 1st Sustainable Building Award Castile and Leon 2006 and the Mediterranean Bio-architecture Award 2012.



PROF. DR. ABDURRAHMAN KILIÇ

■ Turkey

Starting his initial studies about fire at İstanbul Technical University in 1987, Prof. Dr. Abdurrahman Kiliç recognized fire department closely thanks to the training he received in Japan in that period and then dedicated himself to gain scientism for fire department in Turkey, improve the prestige of fire fighters and recognition of fire department in public opinion. Working as a Director of Istanbul Fire Department with his such efforts between 1989 and 1994, Kiliç is the most recognized and reliable person about fire and security today in Turkey. Still an instructor in Istanbul Technical University, Faculty of Mechanical Engineering, Prof. Dr. Abdurrahman Kiliç has pioneered the studies performed about fire security, brought numerous innovations to Fire Department as well as the studies to issue the first Fire Regulation in Turkey and made significant contributions to the development of fire department.



ARCH. ALI ERKAN ŞAHMALI

■ Turkey

Having graduated from METU, Faculty of Architecture at the top of his class in 1979 and completing his master's degree in 1981, he became a Professional Architecture. He still works as a part-time instructor in METU, Faculty of Architecture and runs the Presidency of Turkish Consultant Engineers and Architectures Association. Since 1983, Ali Erkan Şahmalı has been the director of Project/construction management, consultancy, design and design management projects of GÜNARDA Project Management-Research and Consultancy Inc., in his capacity as a partner, board member and general director.

PROF. DR. CELAL ABDI GÜZER

■ Turkey

Prof. Dr. Celal Abdi Güzer received his bachelor's degree from Middle East Technical University in 1982. Having completed his Master's Degree and Postgraduate studies at the same university, Güzer performed his doctorate study on architectural criticism at Newcastle upon Tyne University in England and lectured there. He still gives lessons on architectural criticism, which is his area of specialization, in Middle East Technical University and runs fourth grade project studio implementation. Holding many national and international publications based on theory, criticism and design about Turkish and world architecture, Güzer undertook duties in METU as co-head of department, vice dean and head of the department and he further executed general presidency of Association of Architects for a certain period. Issues such as architectural criticism, contemporary architecture applications and concepts, residence and collective housing, urban transformation and sustainability are included in Güzer's research subjects.



ARCH. DURMUŞ DİLEKÇİ

■ Turkey

He graduated from Ankara Gazi University (GU), Faculty of Architecture in 1992. He completed his master's degree in Istanbul Technical University (ITU), Faculty of Architecture in 1996. He started to work with Gökhan Avcıoğlu in 1994 and they established GAD Architecture entity in 1999. Before creating DDA, Durmuş Dilekçi founded Uras Dilekçi Architecture (UXD) firm as a partner with Emir Uras in 2003. Changing its name, Uras Dilekçi Architecture (UXD) firm has continued its activities as Dilekçi Architecture (DDA) since 2014. DDA aims to take its experience for years and knowledge further. Durmuş Dilekçi has also took part as a guest instructor since 2003 up to now, in important universities of Turkey; including Istanbul Technical University, Yıldız Technical University, Bahçeşehir University, Beykent University. He still gives Architectural Design lessons in Istanbul Technical University.



ASSISTANT PROF. DR. GÜLTEN MANIOĞLU

■ Turkey

Architecture, Gülten Manioğlu has been an instructor in Istanbul Technical University (ITU), Faculty of Architecture since 1993. She took part in several research projects about Energy Efficient Design of Buildings. She has several studies and publications on Energy Efficient Building Design, Use of Solar Energy in Buildings, Water Protection in Buildings, Rain Water Output in Settlements. She currently has classes as an assistant Professor in I.T.U., Faculty of Architecture, Department of Physical Environment Control. She has been a board member in International Association of Building Physics (IABP) since 2009.





ARCH. HAKAN DEMIREL

■ Turkey

Hakan Demirel, who was born in 1983, graduated from Yıldız Technical University (YTU), department of Architecture. He took part in many national-international contests and workshops throughout his learning life. He has been in New York between 2007-2008 for educational purposes. After returning back from New York, he founded "Suyabatmaz Demirel Architecture" in 2008 as a partner, where he still maintains his Professional studies. Despite his short-term background, Suyabatmaz Demirel Architecture has won many architectural and real estate awards up to now. As well as many successful projects executed as an Office, Hakan Demirel was selected one of the best 40 young architects of Europe in 2011 with "Europe 40 Under 40" award. Hakan Demirel, at the same time, runs part-time studio management as of 2012 in design studio of Yıldız Technical University.



PROF. DR. MEHMET ÇALIŞKAN

■ Turkey

Receiving his bachelor's degree and master's degree at Middle East Technical University (METU), Department of Mechanical Engineering, Prof. Çalışkan completed his doctorate study in North Carolina State University in the field of acoustics. Still working in METU, Department of Mechanical Engineering, Prof. Çalışkan is also included in teaching staff of METU, Faculty of Architecture. His academic fields of occupation include acoustic, architectural acoustic, noise control and random vibrations. In parallel to his academic activities, he mentors a great many organizations in Rail Transportation, Automotive, Construction Equipment and Machine Industry sectors as well as Building and Insulation industries.



ASSOCIATE PROFESSOR PHD LUCELIA RODRIGUES

■ UK

Dr Lucelia Rodrigues is an architect and associate professor at the Department of Architecture and Built Environment of the University of Nottingham, where her teaching has a strong focus on environmental design and sustainability. Her work has always been very cross-disciplinary, aiming to inform the sustainable practice of architecture and enhance the quality of the built environment. Lucelia left architectural practice in 2004 to do her master and PhD, becoming a full-time academic in 2008, teaching mostly at post-graduate level. Students under her guidance have since won 28 awards for their projects. She is particularly interested in the resilience of communities and buildings in a changing climate and has been involved in several projects focused on different aspects of sustainability, particularly energy and comfort. She has held several leadership positions and is currently the University's leader for Sustainable and Resilient Cities research area. She is involved in several multimillion-pound projects that have resulted in over 50 peer-reviewed publications.

LECTURER GUILLERMO GUZMAN DUMONT

■ UK

Full time Lecturer and director of External Relations and Communications at the Department of Architecture and Built Environment at the University of Nottingham, United Kingdom. Graduated from Architecture at the Universidad del Bio-Bio, Concepcion Chile in 1993, then carried out studies of MSc Renewable Energy and Architecture and PGCHE (postgraduate certificate in higher education) at the University of Nottingham from September 2000. He has over 15 year of experience in teaching design studio and have researched in Sustainable Energy Technologies integration to architectural design, post occupancy evaluation, pedagogic approaches in architecture related to identity, globalisation and ethics. One of the principal investigators of the Creative Energy Homes project sponsored by a number of important UK housing developers and researcher in the UK entry for the Solar Decathlon Europe 2010. Visiting professor at the Pontificia Universidad Catolica, Universidad del Bio-Bio and Universidad Tecnica Federico Santa Maria of Chile. He has set up a number of joint courses and collaboration agreements with prestigious Latin American universities, given keynote presentations, run workshops and organised joint conferences. He has been running the ISOVER competition studio for the last two years.



DOCENT TETYANA KASHCHENKO, PHD

■ Ukraine

She is architect, docent of the Department of Architectural design of Kyiv National University of Construction and Architecture (KNUCA). Her architectural professional activity is focused on architectural design of dwelling and civil buildings. Graduated with Master Degree from Architectural faculty of KNUCA. In 2001 obtained degree of Ph.D. of Architecture. At the Architectural faculty she teaches Architectural design, Theory of architectural design, launched lecture course "Architecture of energy efficient buildings". Tutor of post graduate students, bachelor and master degree. Curator of students diploma and contests projects, awarded at national and international competitions. Fulfilled internship at Architectural department of Gent State University (Belgium), course of International Passive House Summer School, Fachhochschule Karnten, Austria. Was coordinator of Ukrainian national team of EASA and coordinator of student research work in international project "RKM Save Urban Heritage". Took part at International student workshop "Smart city. City as an educational polygon", Foundation Romualdo del Bianco, Florence (Italy) as a teacher. Has publications in scientific and professional editions, professional magazines. Member of organization committee of International conference "Energy Integration", initiator and leader of several students architectural contests, exhibitions and conferences in the field of sustainable and energy efficient architecture.





Invitation for Competition Submissions Multi-Comfort House Students Contest 2017

Urban regeneration in Madrid, Spain

International, two-stage, open competition, 2017 edition

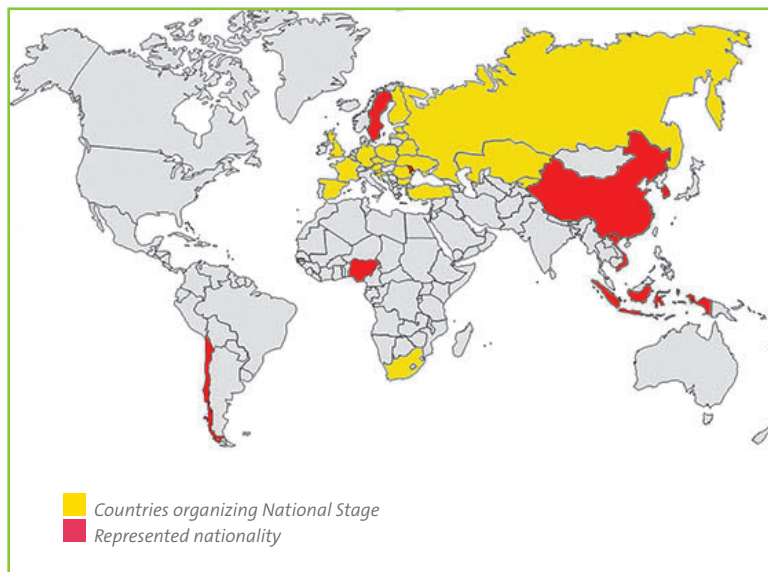
- Content:** Urban regeneration of a community in Madrid, Spain
- Participants:** Students
- Organizer:** Saint-Gobain Insulation with the participation of national Saint-Gobain ISOVER, CertainTeed and IZOCAM organizations
- Official Website:** www.isover-students.com

The task for 13th International Edition of Multi-Comfort House Students Contest developed by ISOVER in close collaboration with Department of Architecture of Municipality of Madrid is the Urban Regeneration of a community within the perimeter of Gran San Blas area of Madrid

The participants will have to create a sustainable architecture integrated into the urban space while responding to MAD-RE and Saint-Gobain Multi-Comfort Criteria and taking into account the climatic conditions and regional context of Madrid. Beside constructional, the social and economic aspects also have to be considered and respected and the proposed solution should give a new impulse in the existing urban area.

The architecture has to fit in the surrounding of the site. Urban space solutions for the immediate surroundings of the site will be proposed.

The overall scope of the task is to have constructive approach to renovation and to get actively involved in giving shape to future renovation of European cities.



*Participating countries to final stage
of ISOVER Multi-Comfort House Students Contest, Edition 2016*

More information about the new edition of the contest as well as full task, pictures and documents, site plan can be found at www.isover-students.com

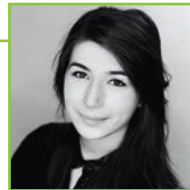
Community Development in Brest, Belarus

Minsk, Belarus

PRIZE
AUSTRIA
National Stage 2016



**BERNHARD
PRIETH**

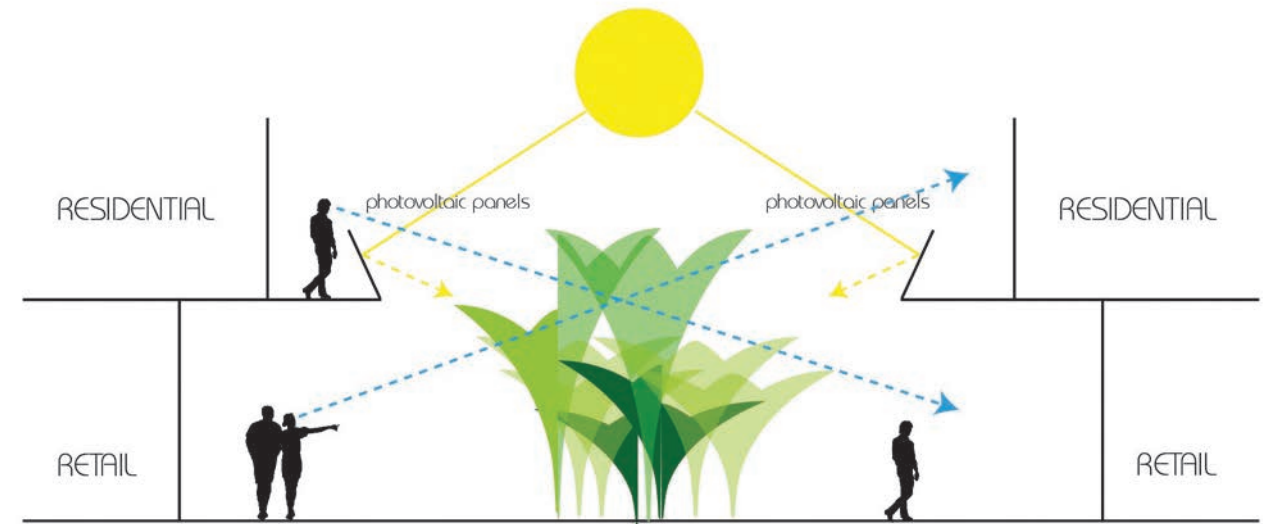
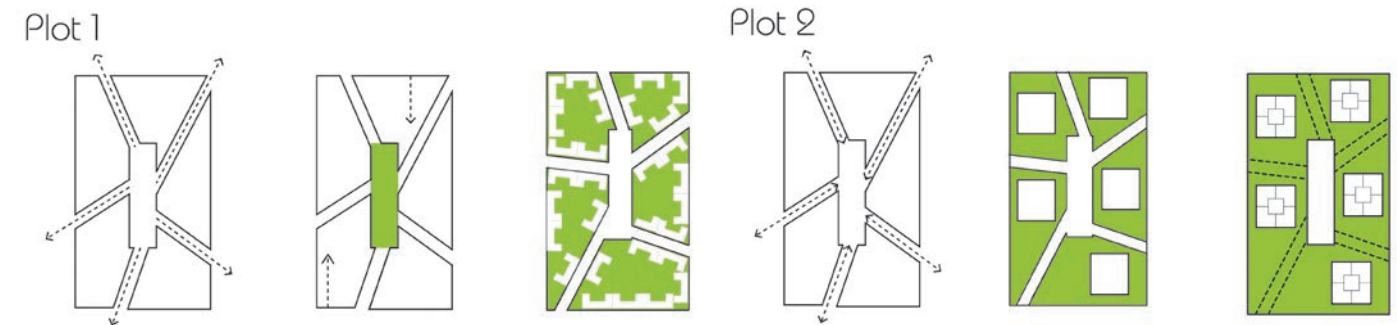
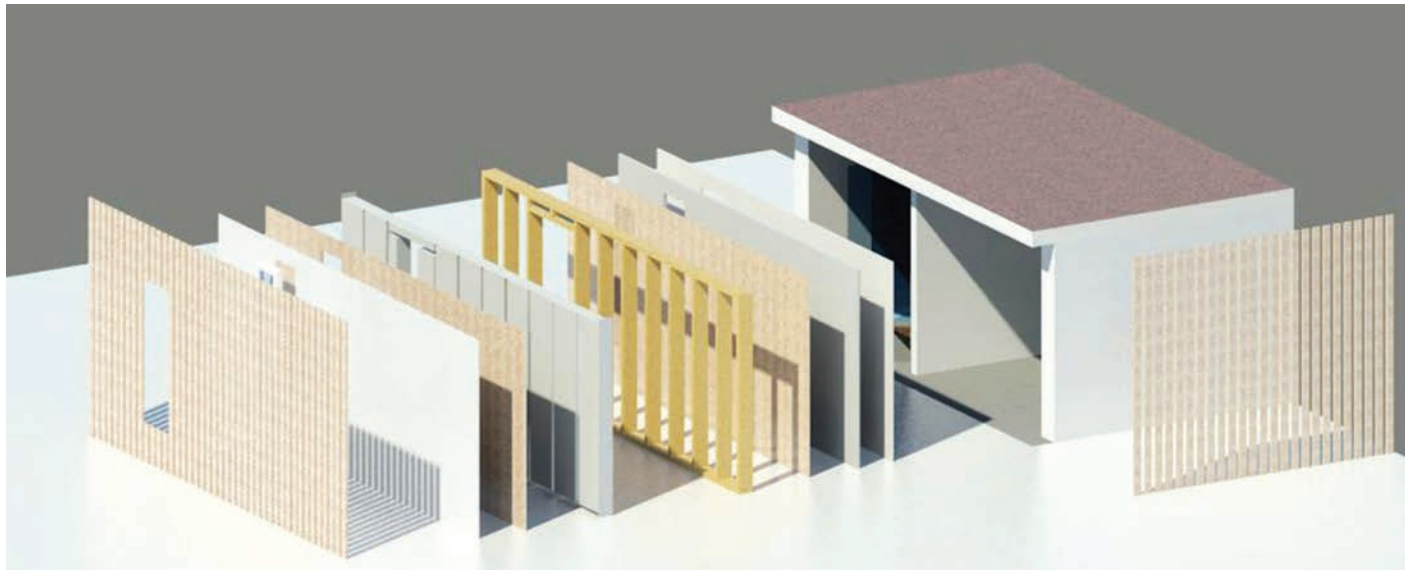


**CEMILE
CENGIZ**

University of Innsbruck

01





II PRIZE
BELARUS
National Stage 2016



HANNA
KRASNAHORAVA

BNTU

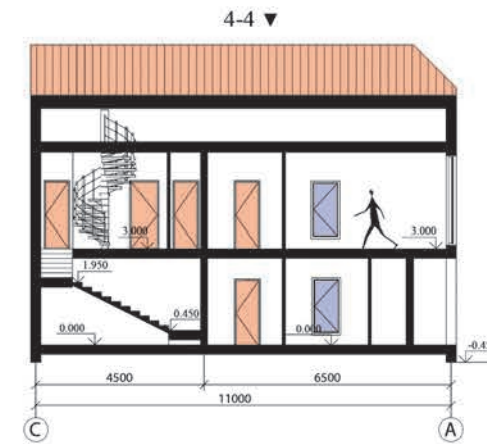
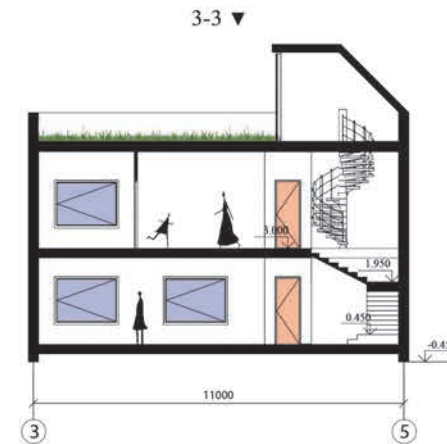
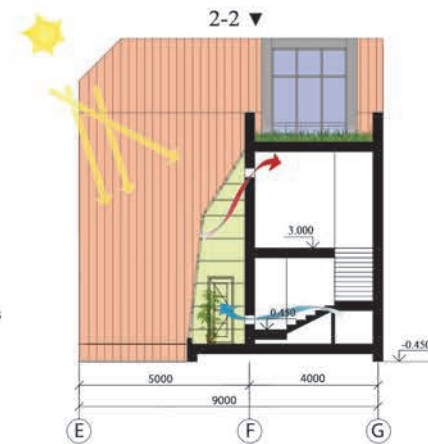
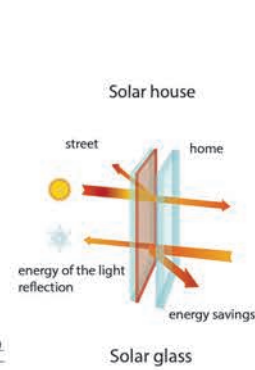
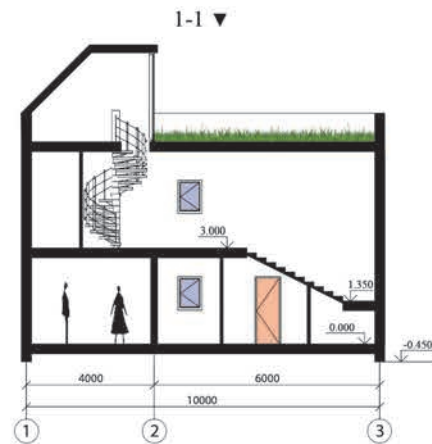
02

Community Development in Brest, Belarus

Minsk, Belarus



more information on www.isover-students.com

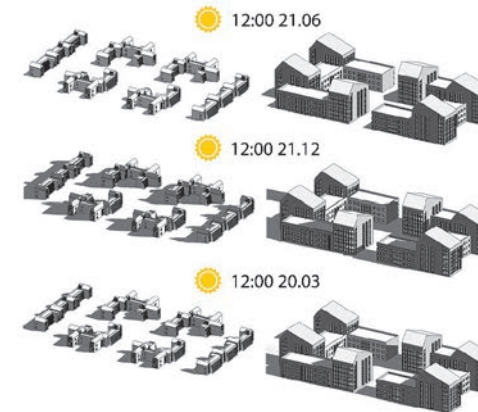
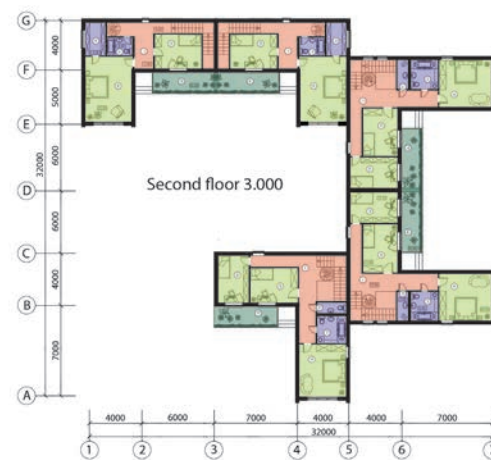


Ceramic roof tile, roof finishing 35x15 cm;
Transversal area between longitudinal slat;
0,05 - separation layer, water barrier,
rolls over longitudinal slats to avoid clipping;
wooden deck oak;
10 - insulation, ISOVER lightweight glass wool;
0,05 - glass fiber net, insulation support;
20 - insulation, ISOVER lightweight glass wool;
Water vapor barrier, climatic membrane,
Isover Vario KW Duplex;
10 - insulation, ISOVER lightweight glass wool;
1,5 - clipboard layer, finishing support;
2 - plaster layer, finishing support;
0,5 - wall paint finishing;

Ceramic wall tile 35x15 cm;
3 - ventilated area between
formwork elements;
1,5 - clipboard layer, water
vapour permeable wind
protection;
10 - insulation, ISOVER
lightweight glass wool;
0,05 - glass fiber net,
insulation support;
Structural frame 6x20 cm;
20 - insulation, ISOVER
lightweight glass wool;
Water vapor barrier,
climatic membrane,
Isover Vario KM Duplex;
10 - insulation, ISOVER
lightweight glass wool;
1,5 - clipboard layer,
finishing support;
2 - plaster layer,
finishing support;
0,5 - wall paint layer;

1,91 - hardwood flooring;
1,50 - clipboard panel;
55,0 - ISOVER glass wool impact
sound insulation board;
1,50 - clipboard panel;
20,0 - ISOVER glass wool;
4,00 - lathwork on spring hangers;
1,50 - plasterboard R_w = 50 dB

1,5 - parquet, floating layer;
0,02 - vapour barrier;
3,2 - ISOVER distansol clipboard
panel with distance feet
24,0 - ISOVER glass wool panel
2x12 cm;
4,0 - protective concrete
separating layer;
0,05 - separating layer
(water barrier);
12,0 - sub-concrete
separating layer;
18,0 - XPS-Extruded Polystyrene
foam board
Protective concrete
Round gravel





12th ISOVER Multi-Comfort House Students Contest 2016

II PRIZE
BELARUS
National Stage 2016



**ALIAKSANDR
JANATAN
KARPITSKI**

BSTU



**DAVYD
TSYBIKAU**



**DANIIL
CHARATOVICH**

03

Community Development in Brest, Belarus

Minsk, Belarus



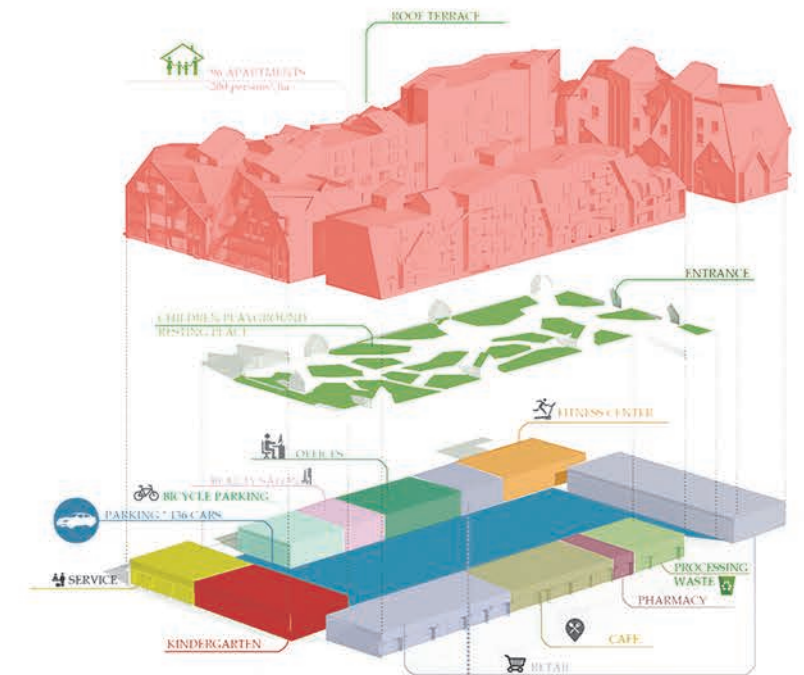
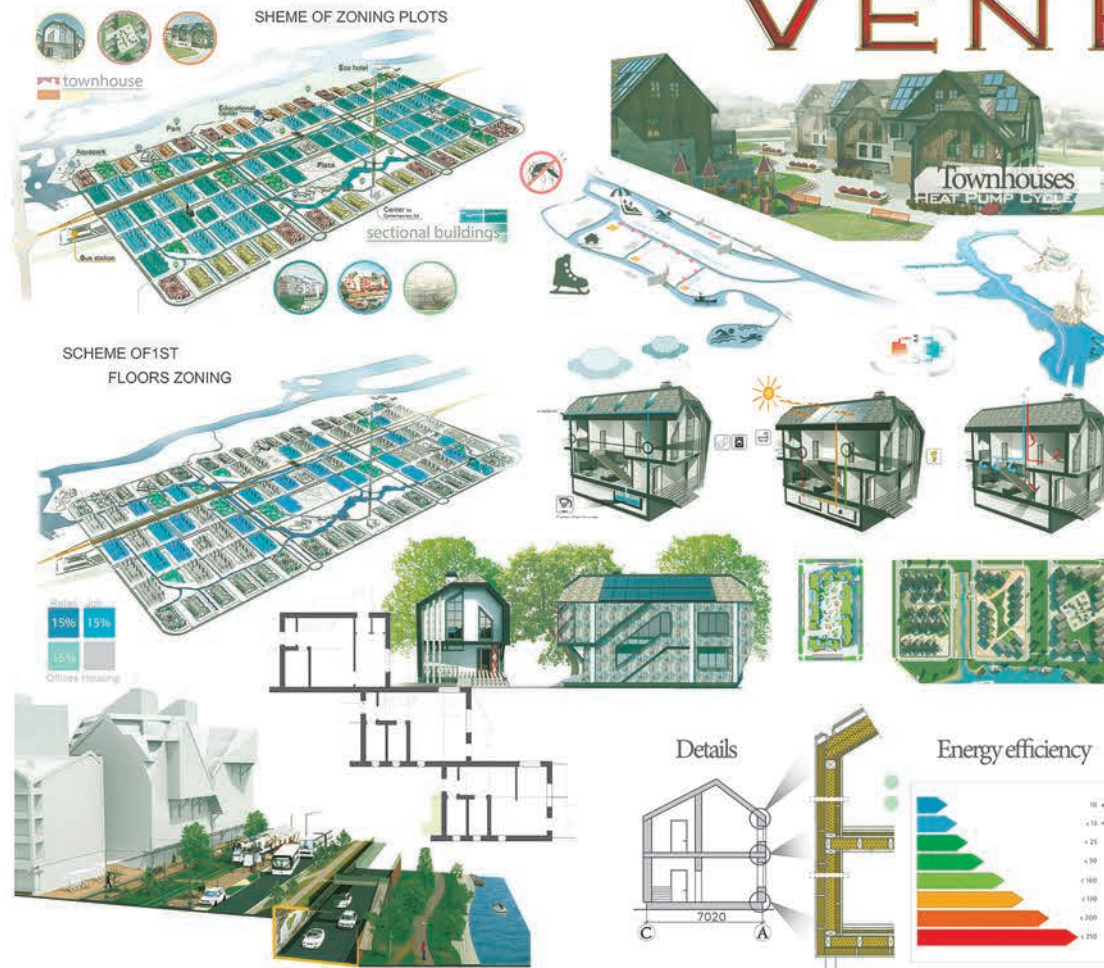
Special award

ISOVER
Multi-Comfort House
Students Contest
International stage,
Minsk 2016

more information on www.isover-students.com

ISOVER
SAINT-GOBAIN

VENETIA LITHVANICA

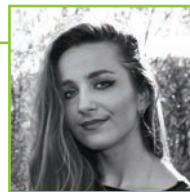


III PRIZE
BELARUS
National Stage 2016



**ANASTASIYA
ARTIUSHCHYK**

BSTU



**HANNA
PETRASIUK**



**KATSIARYNA
SCHERBO**

04

Community Development in Brest, Belarus

Minsk, Belarus



more information on www.isover-students.com



ROOFING MATERIAL
 1. METAL, CHEAPETS, SOFT TILE, ETC.
 2. GORETHETON
 3. VETROGLASSHIT
 4. THERMAL INSULATION OF ISOVER KL 32
 5. RAFTERS
 6. VAPOR BARRIER
 7. INTERNAL FINISHING GYPSUM CARDBOARD

INTERNAL BRICKLAYING OR FORM CONCRETE BLOCKS
 1. VAPOR BARRIER - A POLYETHYLENE FILM (AT NEED)
 2. THERMAL INSULATION OF ISOVER KL 34
 3. FLEXIBLE FIBERGLASS OR METAL COMMUNICATIONS
 4. FACING BRICK

VACUUM SYSTEM OF RUBBISH DISPOSAL AND WATER RECYCLING



Energy efficiency classes

Class	Energy consumption range (kWh/m²/yr)
A	< 10
B	< 15
C	< 25
D	< 35
E	< 50
F	< 100
G	> 150





PRIZE
BELGIUM
National Stage 2016



05



**ANGELIQUE
VANDEBROEK**

UHasselt



**ANNELIES
VEKEMANS**



**HELENA
VANDERLINDEN**

more information on www.isover-students.com

Community Development in Brest, Belarus

Minsk, Belarus





SECTIONS

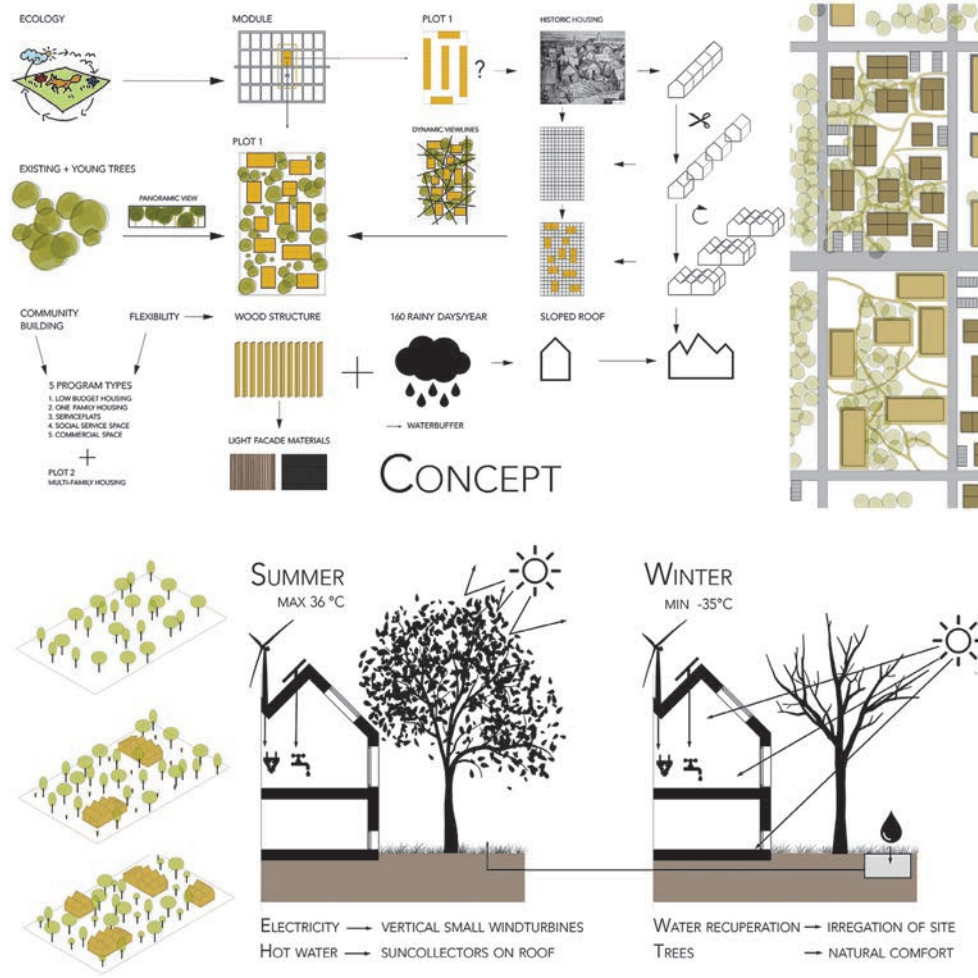
FLOORPLANS



LEVEL 2



LEVEL 1

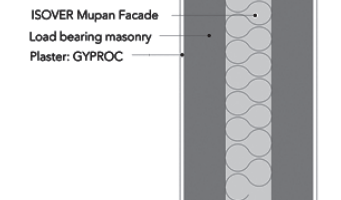
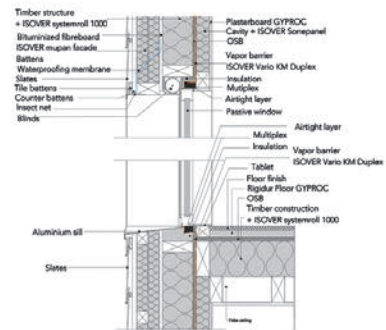
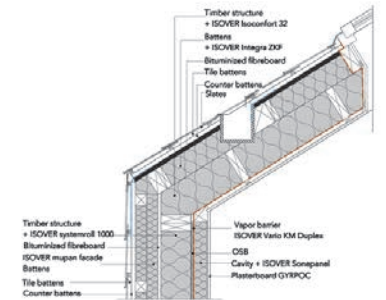


U-value - Family house

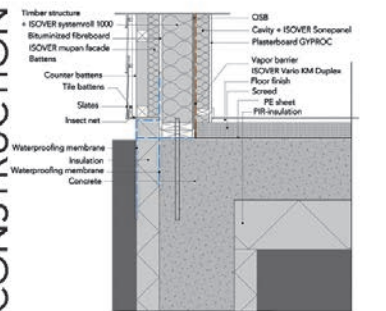
BUILDING ELEMENT	MEAN U-VALUE (W/M² K)
Pitched roof/mono pitched	0,10
Wall against air	0,11
Wall against neighbour	Not taken into consideration
Slab against wall	0,10
Windows	0,73
Doors	0,80

Multi-comfortdesigner Results

CRITERIA	VALUE
Heating energy demand (kWh/m²a)	11,80
Cooling energy demand (kWh/m²a)	0,00
Air-tightness (V/h)	0,60
Daylighting (%)	> 60%
Overheating	0,00



CONSTRUCTION





Community Development in Brest, Belarus

Minsk, Belarus

I PRIZE
BULGARIA
National Stage 2016



**BOGDAN
RADICHEV**



**RADOSLAV
TODOROV**



**ROSEN
YORDANOV**

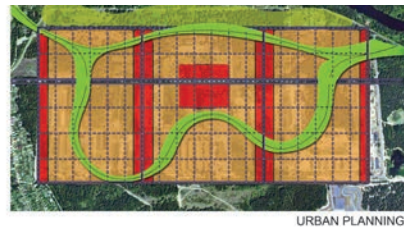
06

University of Architecture, Civil Engineering and Geodesy

more information on www.isover-students.com



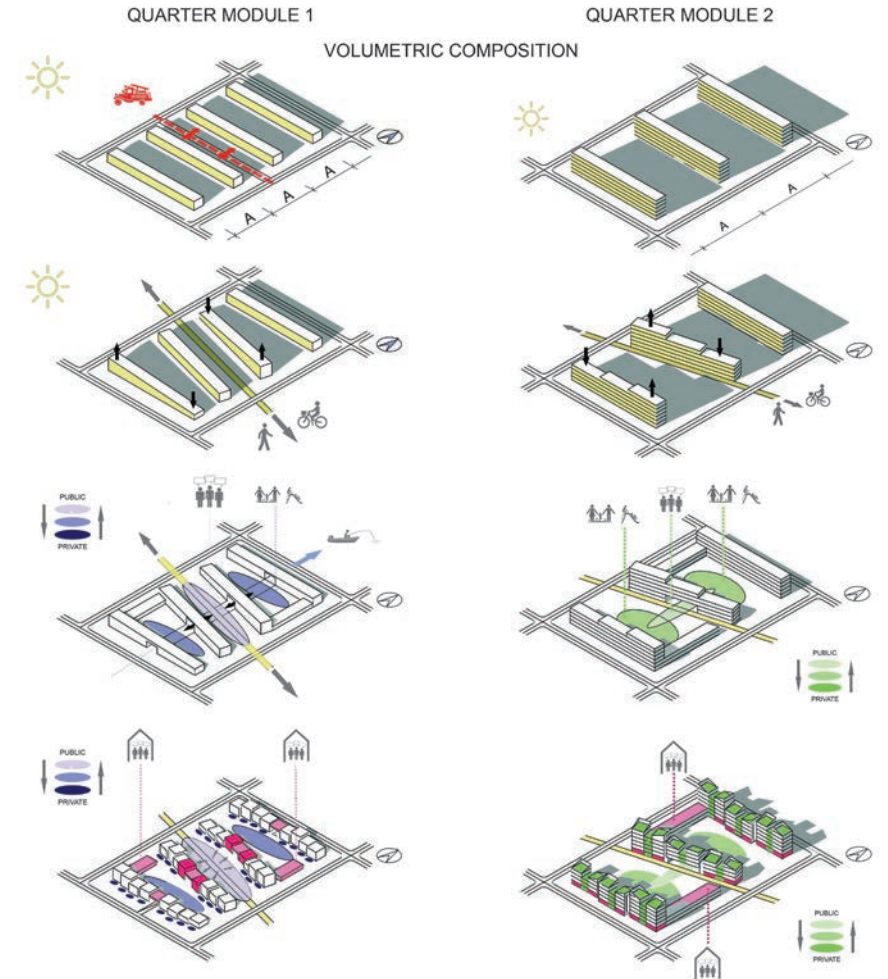
I PRIZE
ISOVER
Multi-Comfort House
Students Contest
International stage,
Minsk 2016



URBAN PLANNING



SECTION THROUGH MAIN ROAD



III PRIZE
BULGARIA
National Stage 2016



**DENITSA
IVANOVA**



**DEISLAVA
PARLAPANSKA**

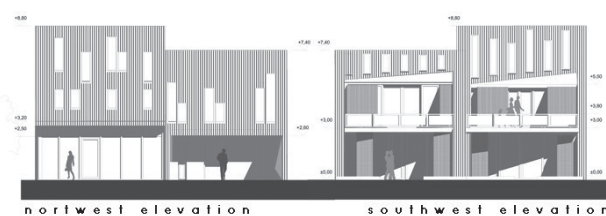
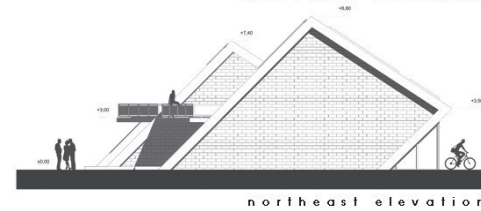
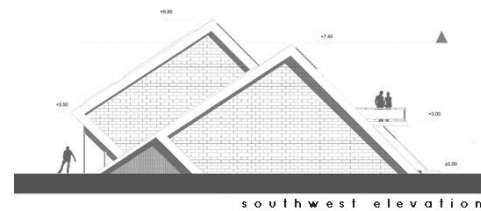
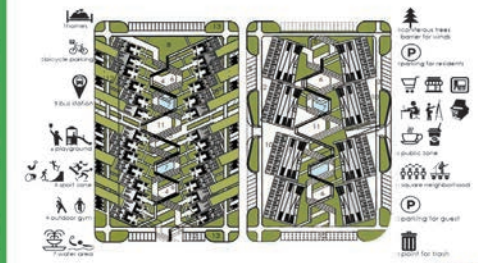
University of Structural Engineering & Architecture, Sofia

07

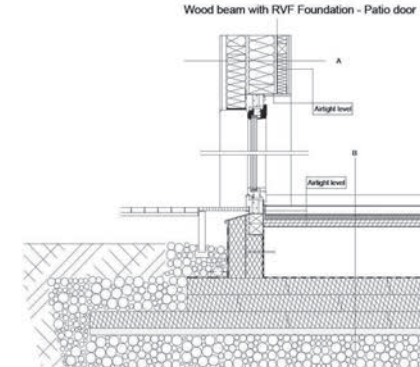
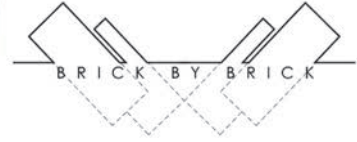
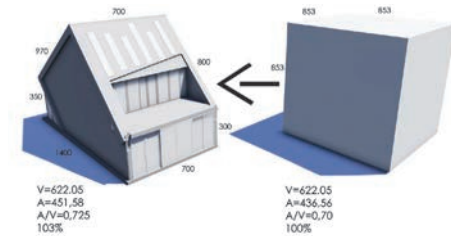
Community Development in Brest, Belarus

Minsk, Belarus





MORPHOLOGY



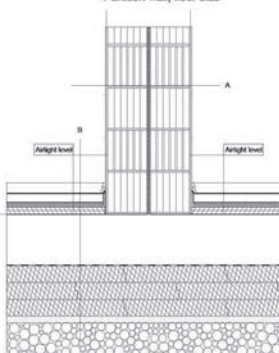
Build-up A in cm

- 2.5 Rigips Regular H double layer, each layer 12.5mm
- 6.0 ISOVER Intergo UNF 1-032 (perforated 60mm, 13% wp)
- ISOVER VARIO KM Duplex UV
- 1.5 OSB board on chipboard
- 18.0 ISOVER Intergo POF 1-032 (perforated 60mm, 14% wp)
- 1.5 OSB board on chipboard
- 42.0 Korkor EPS 1-032 Easy Fix 120 (perforated 60mm, 12% wp)
- 3.0 Rear ventilation
- 1.0 Exterior cladding (e.g. wood, metal, plastic, stone)

Build-up B in cm

- Floor covering
- 5.0 Screed
- Vapor barrier and separating layer
- 3.0 ISOVER Alucal EP 3-040
- 4.0 ISOVER Expert EPS 100G20 as compensation for height
- 0.5 Sealing against moisture
- 30.0 Concrete foundation slab
- Separating layer
- 10.0 Styrodur CS
- 10.0 Styrodur CS
- 10.0 Styrodur CS
- Granular subbase

Partition wall, floor slab

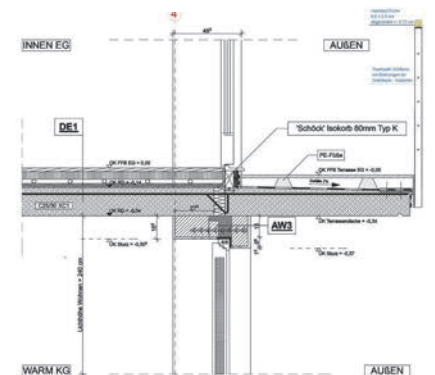


Build-up A in cm

- 1.5 Interior plaster
- 24.0 Variotherm VWP 1-035
- 14.0 ISOVER Staltherm WVP 1-035
- 14.0 ISOVER Staltherm WVP 1-035
- 1.5 Thick plaster

Build-up B in cm

- Floor covering
- 5.0 Screed
- Vapor barrier and separating layer
- 3.0 ISOVER Alucal EP 3-040
- 4.0 ISOVER Expert EPS 100G20 as compensation for height of tube
- 0.5 Sealing against moisture
- 30.0 Concrete foundation slab
- Separating layer
- 10.0 Styrodur CS
- 10.0 Styrodur CS
- 10.0 Styrodur CS
- Granular subbase



Build-up A in cm

- 1.5 Interior plaster
- 24.0 Variotherm VWP 1-035
- 14.0 ISOVER Staltherm WVP 1-035
- 14.0 ISOVER Staltherm WVP 1-035
- 1.5 Thick plaster

Build-up B in cm

- Floor covering
- 5.0 Screed
- Vapor barrier and separating layer
- 3.0 ISOVER Alucal EP 3-040
- 4.0 ISOVER Expert EPS 100G20 as compensation for height of tube
- 0.5 Sealing against moisture
- 30.0 Concrete foundation slab
- Separating layer
- 10.0 Styrodur CS
- 10.0 Styrodur CS
- 10.0 Styrodur CS
- Granular subbase

Build-up A in cm

- 1.5 Interior plaster
- 24.0 Variotherm VWP 1-035
- 14.0 ISOVER Staltherm WVP 1-035
- 14.0 ISOVER Staltherm WVP 1-035
- 1.5 Thick plaster

Build-up B in cm

- 1.5 Interior plaster
- 24.0 Variotherm VWP 1-035
- 14.0 ISOVER Staltherm WVP 1-035
- 14.0 ISOVER Staltherm WVP 1-035
- 1.5 Thick plaster



12th ISOVER Multi-Comfort House Students Contest 2016

III PRIZE
BULGARIA
National Stage 2016



ILYA
DENCHEV

University of Structural Engineering & Architecture, Sofia

08

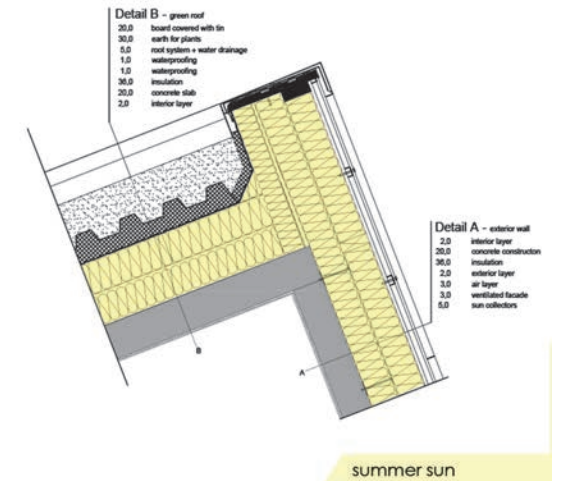
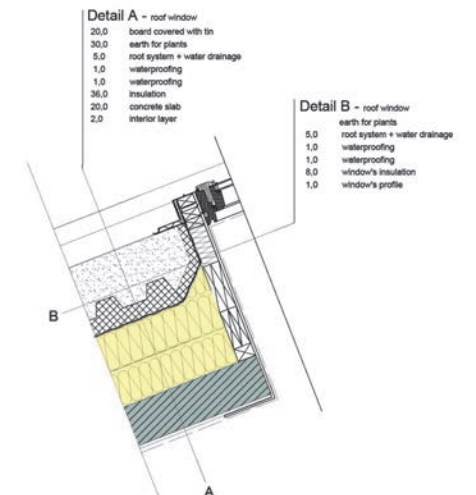
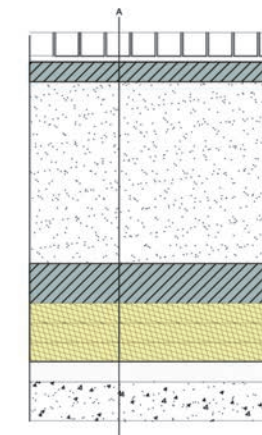
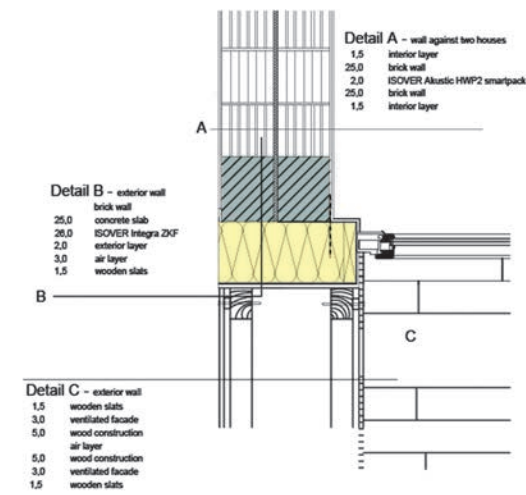
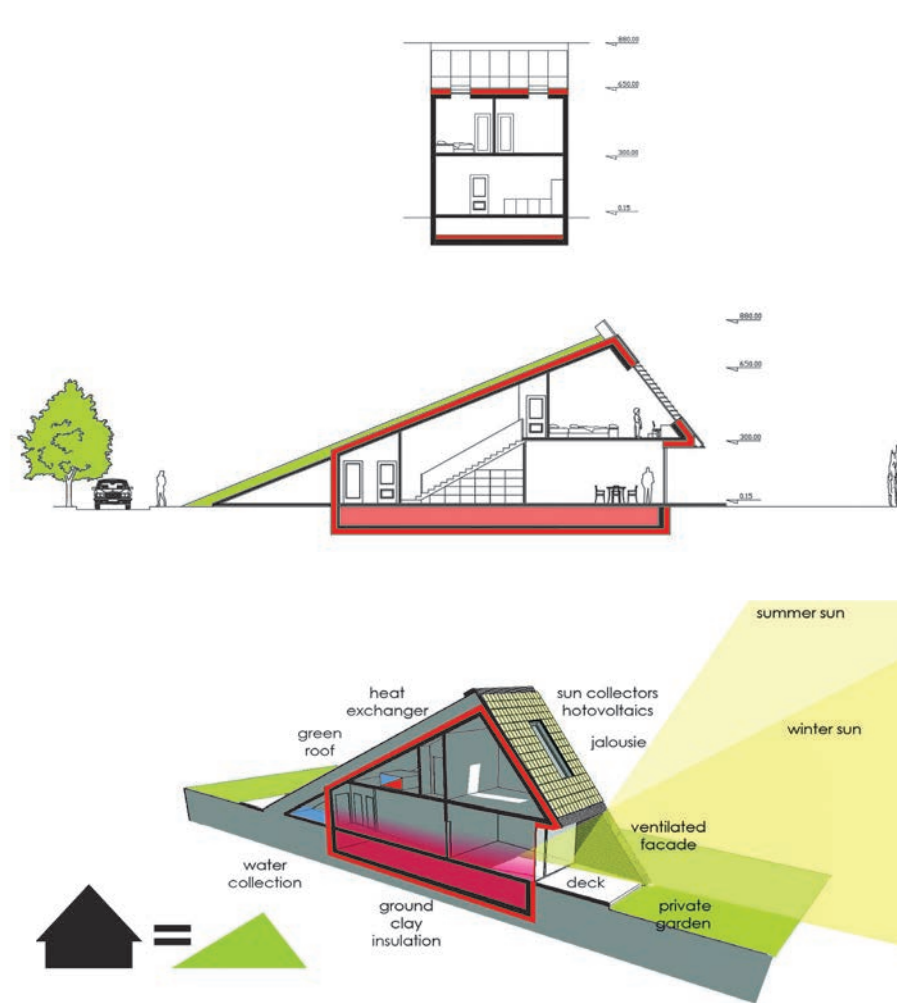
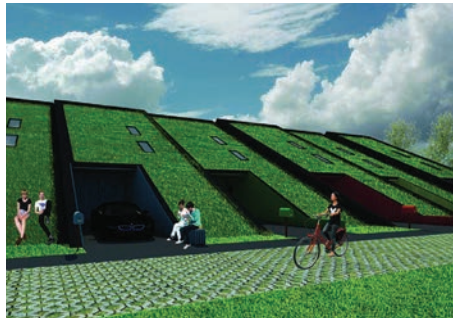
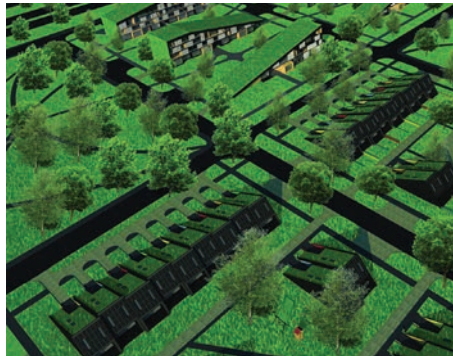
Community Development in Brest, Belarus

Minsk, Belarus



more information on www.isover-students.com

ISOVER
SAINT-GOBAIN





PRIZE
CROATIA
National Stage 2016



KARLA
JAMBREŠIĆ

Zagreb University



MISLAV
BARADA

09

Community Development in Brest, Belarus

Minsk, Belarus





rowhouse concept schemes



north facade



south facade



rowhouse cross sections

loadbearing construction

loadbearing reinforced concrete structure
very low carbon footprint - 6,13
roof slab 16 cm
foundation slab 40/80 cm
foundation slab 10-20 cm

loadbearing laminated wood structure
for every m² of wood used instead of other materials,
approx. 1 tonne of CO₂ is saved
creates healthier environment
is a renewable material
roof beam 824 cm, spacing 80 cm
wood column 520 cm
beam 524 cm, spacing 80 cm
steel rods 10-20 mm

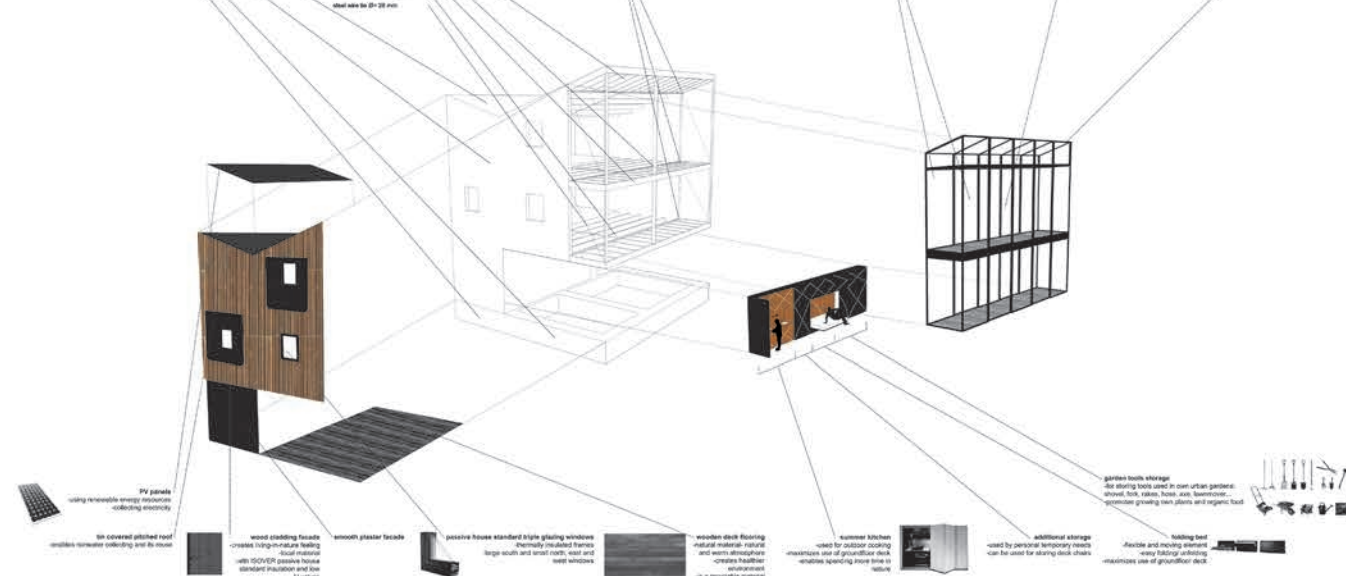
thermal break element
allows thermally insulated connections between wood
and concrete
reduces thermal bridges, CO₂ emissions and conserves
natural energy resources

passive house standard triple
glazing sliding doors
- thermally insulated frames
- internal and external facades

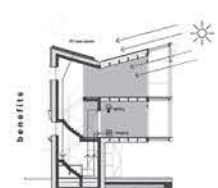
multi-benefit buffer space
enables natural ventilation
enables temperature regulation
protects from overheating
protects from external noise

multi-benefit buffer space

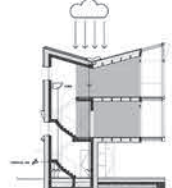
external sun protection
prevents interior overheating
protects from direct sun rays



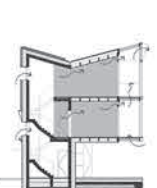
facade and roof PV panels



benefits
PV panels, roof shape and daylight
PV panels placed on the southern roof slope enable the most
efficient collection of solar energy which is stored in
accumulators of the groundfloor
big openings and roof slope on south facade (15°) enable
collection of sunlight in all shapes in the house



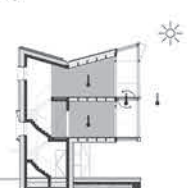
rainwater collection
roof shape enables maximum efficiency of rainwater collection
water is filtered and stored in the underground tank
collected water is used as sanitary water and for external use



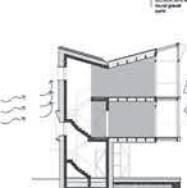
natural ventilation
efficient natural ventilation is enabled by placement of the
windows on two opposite sides of the house
the inter-space can be naturally ventilated through openings
on the bottom and the top of the construction



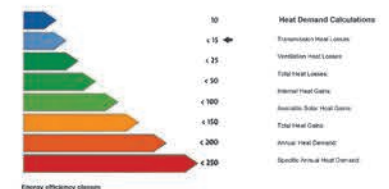
temperature regulation
during hot days interior facade is closed but inter-space is ventilated
which prevents house interior from overheating



temperature regulation
during cold days inter-space is closed so air in inter-space is
warmer than outside air
inter-space can be naturally ventilated with warmer air through
inter-space



wind and noise protection
weathering northern walls protect the house from cold winds
inter-space on south protects the house from outside noise



passive energy usage and approach to sustainability diagrams

II PRIZE
CROATIA
National Stage 2016



**DINO
ŠARUGA**

Zagreb University



**ELLA
CAHUNEK**



**TAMARA
LUKIĆ**

10

Community Development in Brest, Belarus

Minsk, Belarus

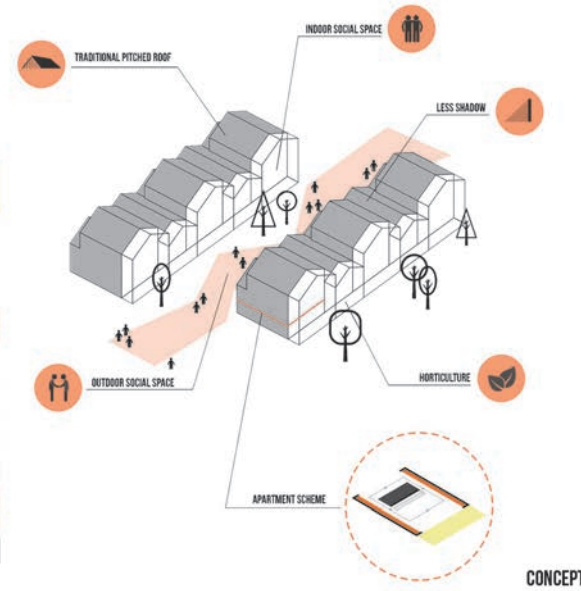




SITUATION



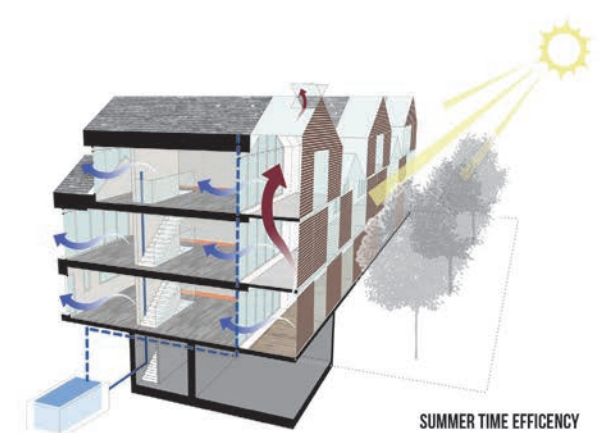
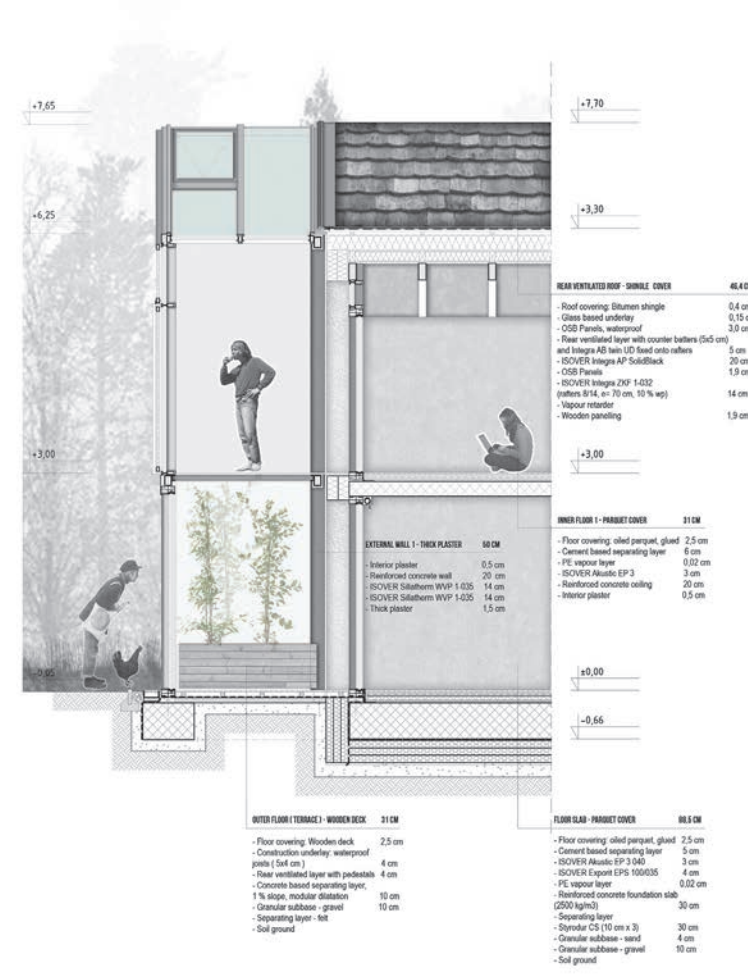
CROSS SECTION



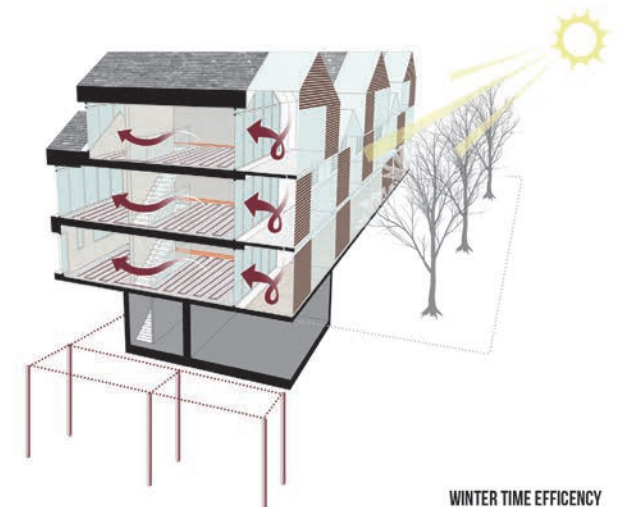
CONCEPT



FASADES



SUMMER TIME EFFICIENCY



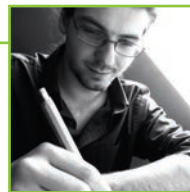
WINTER TIME EFFICIENCY



PRIZE
CZECH REPUBLIC
National Stage 2016



**JOSEF
HOFFMANN**



**MARTIN
STARK**

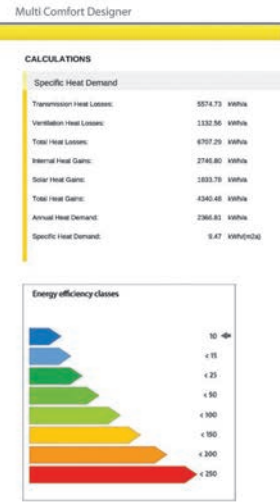
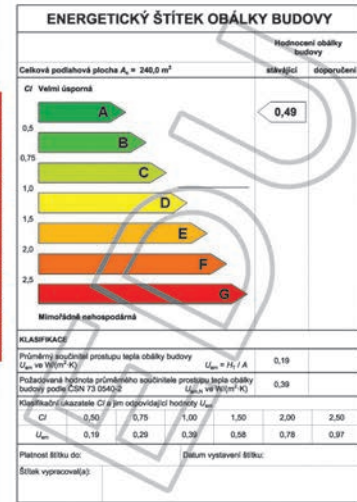
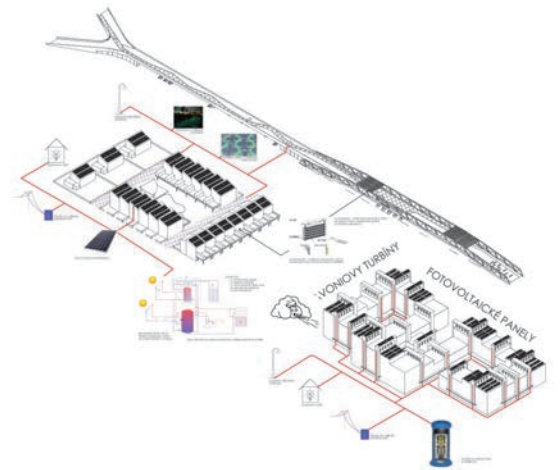
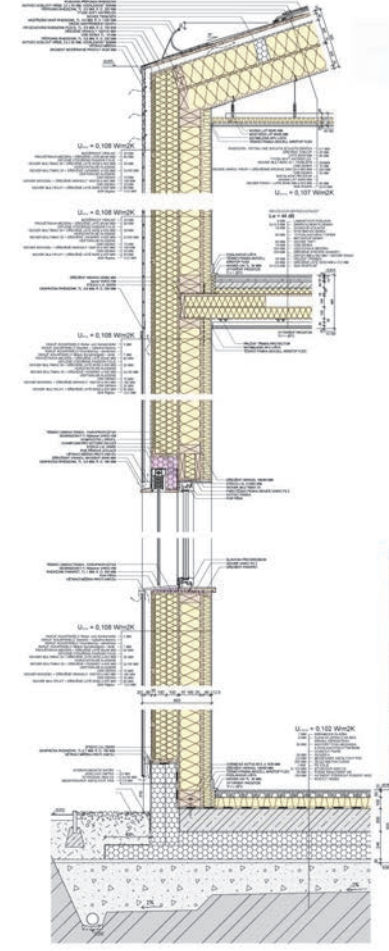
Czech Technical University in Prague

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Community Development in Brest, Belarus

Minsk, Belarus







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II PRIZE
CZECH REPUBLIC
National Stage 2016



**TOMÁŠ
PAPOUŠEK**

Czech Technical University in Prague

12

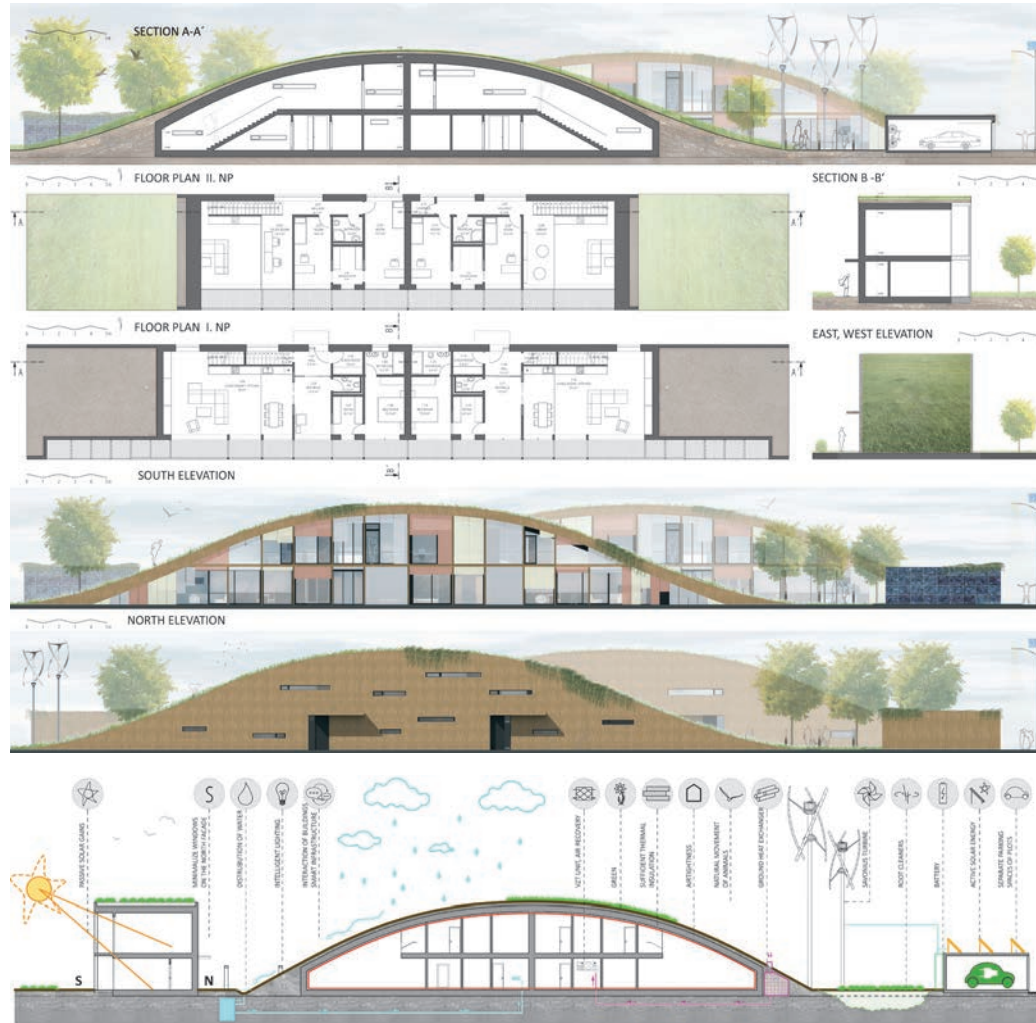
more information on www.isover-students.com

Community Development in Brest, Belarus

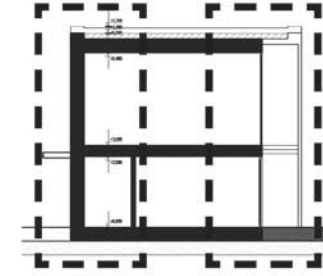
Minsk, Belarus



ISOVER
SAINT-GOBAIN



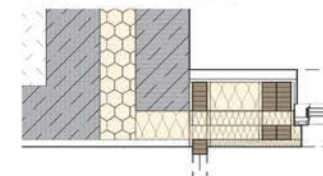
DETAIL M 1:20



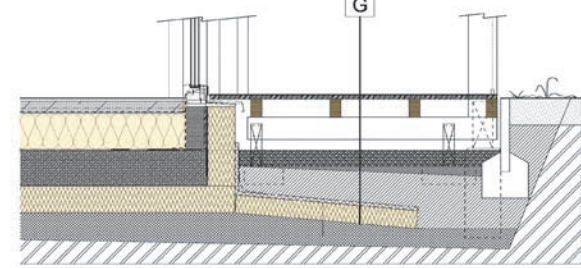
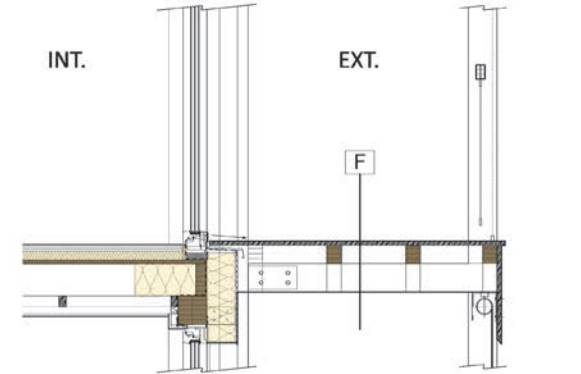
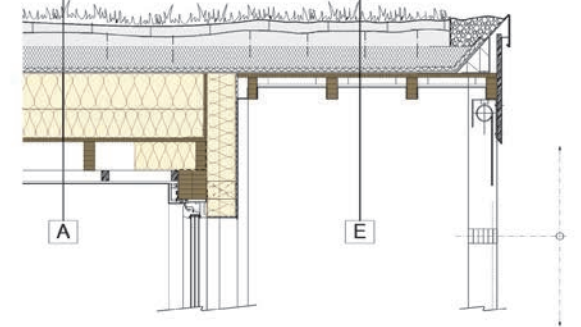
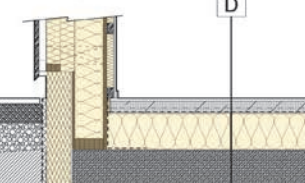
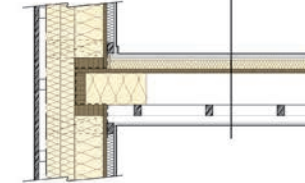
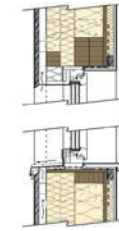
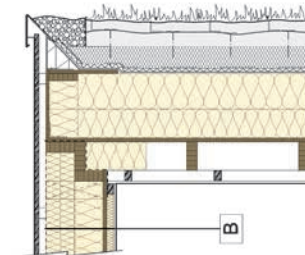
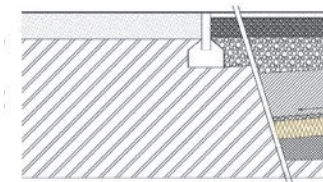
PLAN - WALL M 1:20



PLAN - WALL M 1:20



PLAN - WINDOW M 1:20





III PRIZE
CZECH REPUBLIC
National Stage 2016



**DANIEL
ZYGULA**



**TOMÁŠ
MORAVEC**

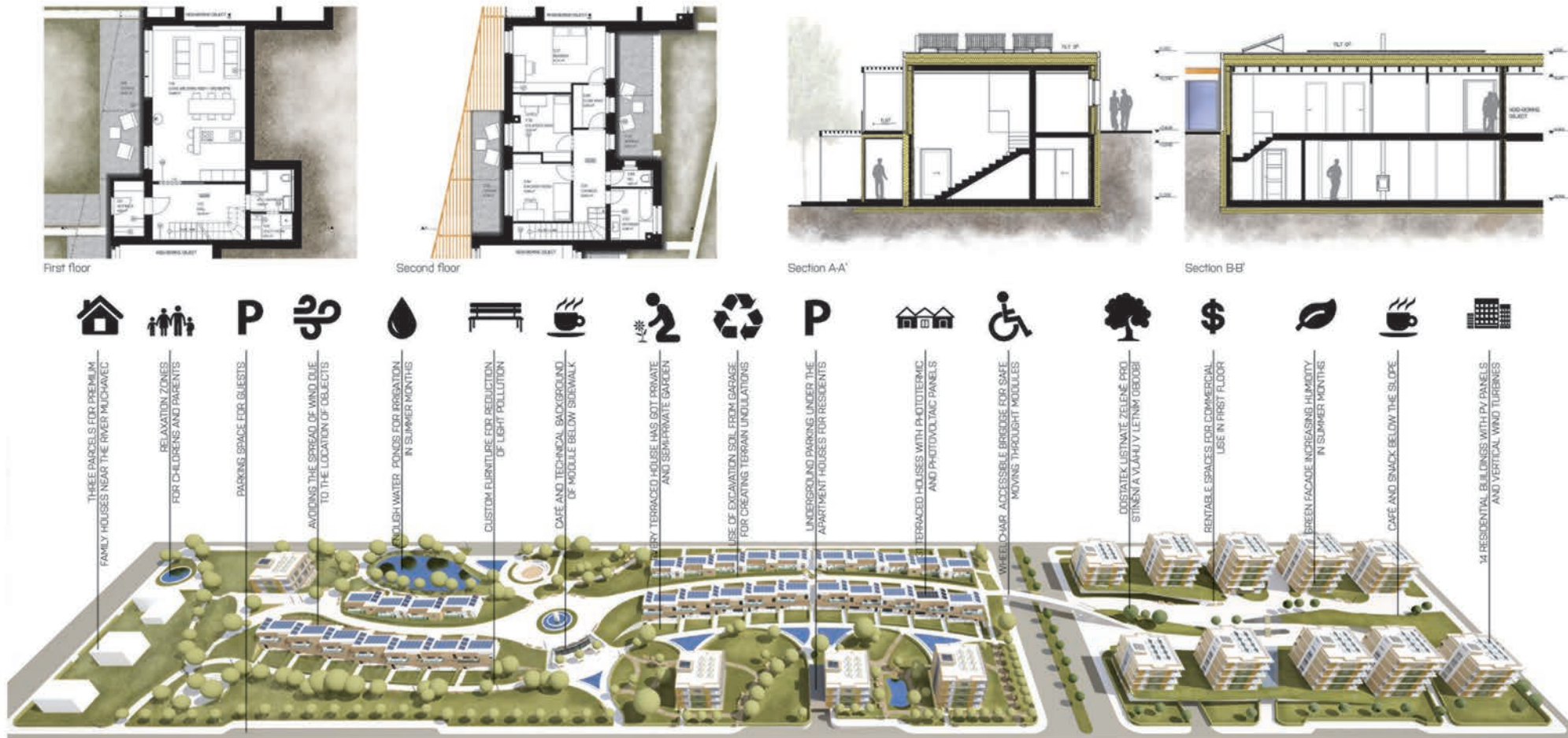
Czech Technical University in Prague

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Community Development in Brest, Belarus

Minsk, Belarus





PRIZE
ESTONIA
National Stage 2016



**ANDRUS
MARK**



**KRISTJAN
NAARIS**

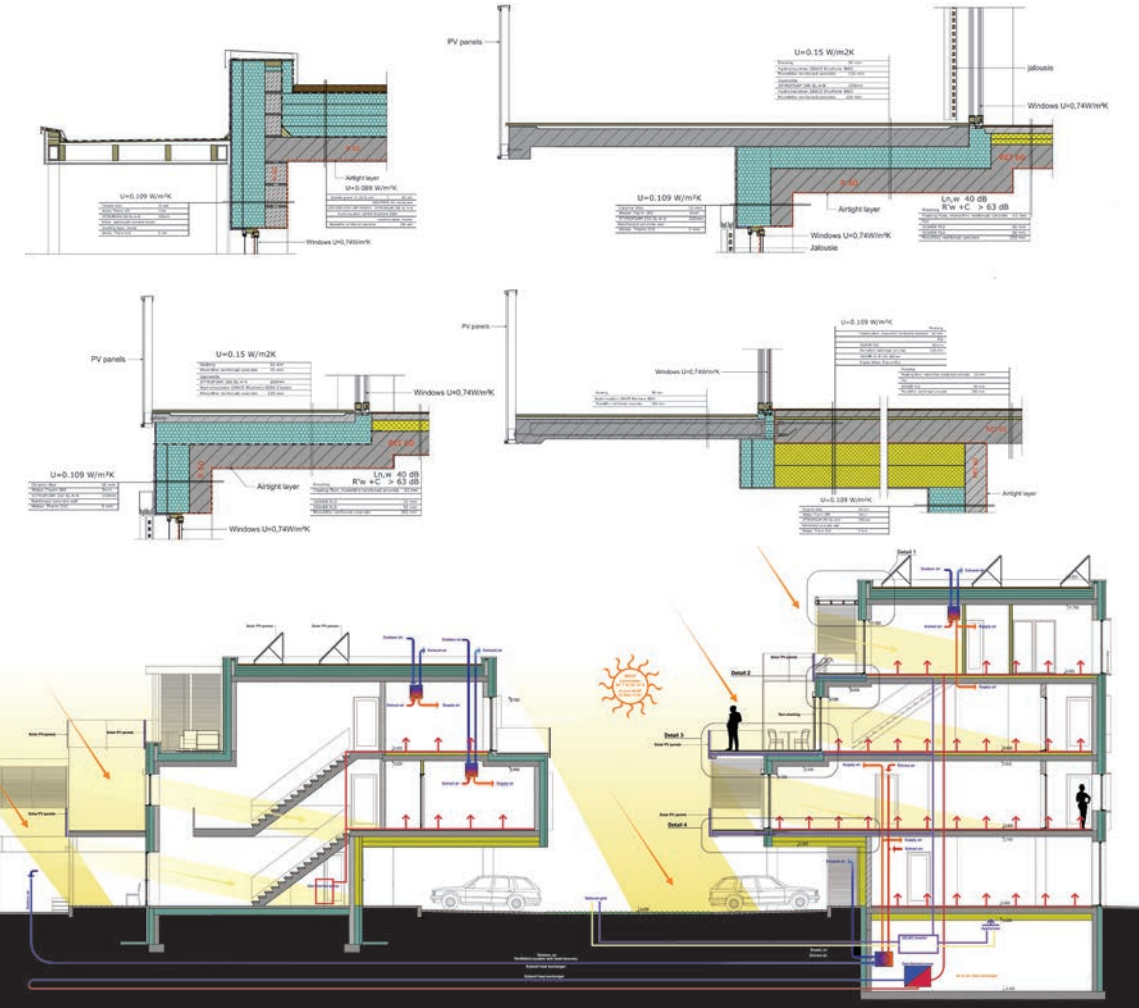
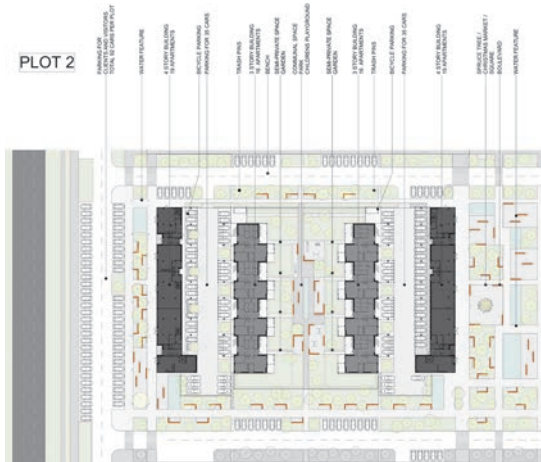
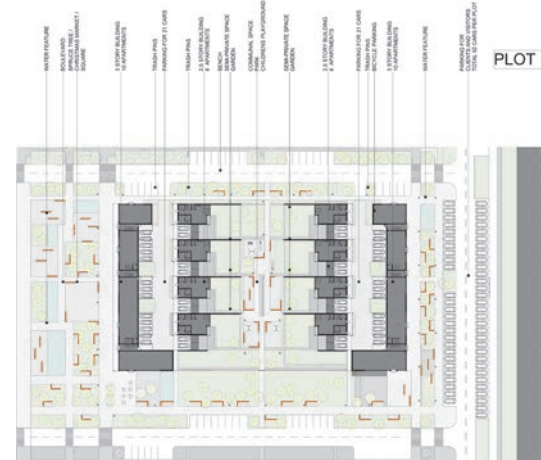
Tallinn University of Technology

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Community Development in Brest, Belarus

Minsk, Belarus





Community Development in Brest, Belarus

Minsk, Belarus

PRIZE
ESTONIA
National Stage 2016



**GEA
HEIN**

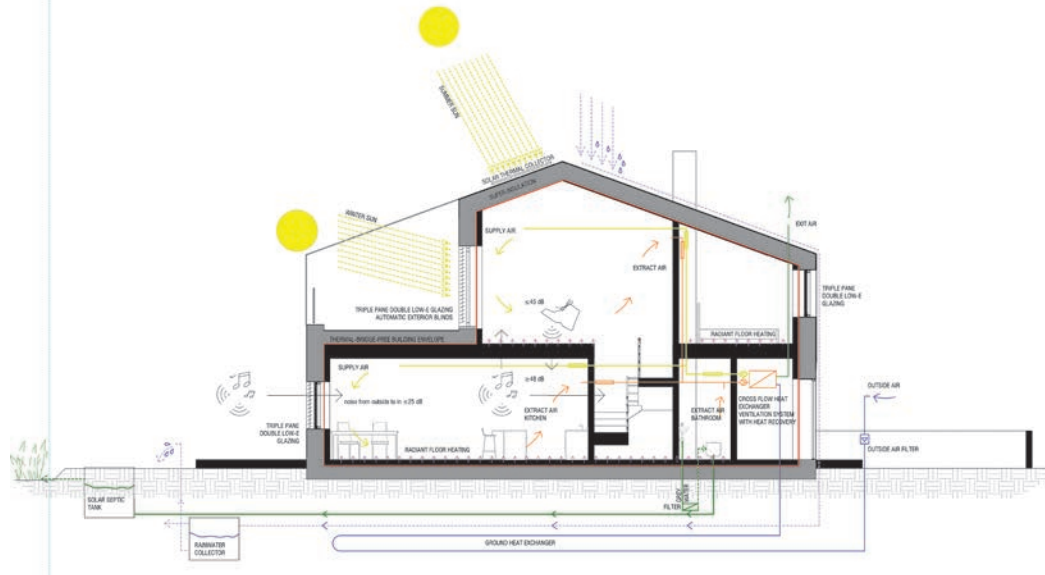
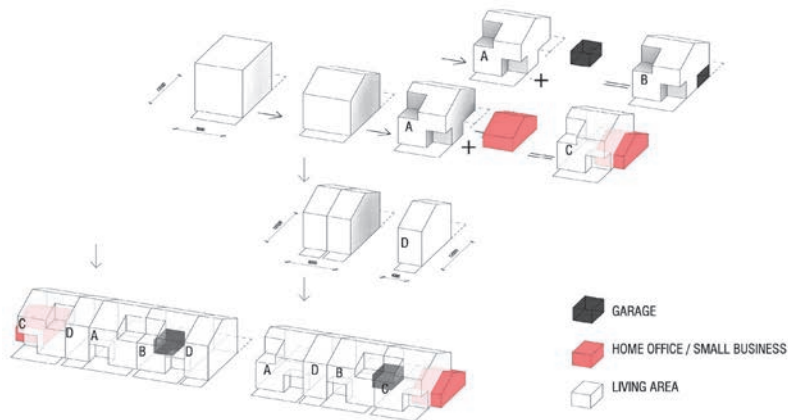
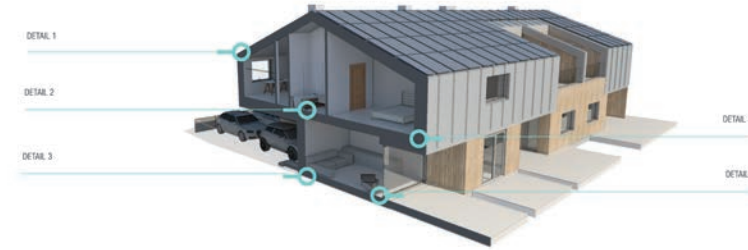
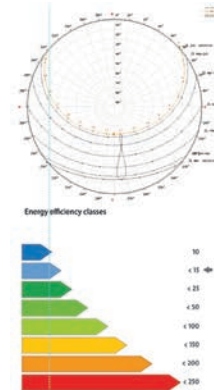


**INGRID
VISKUS**

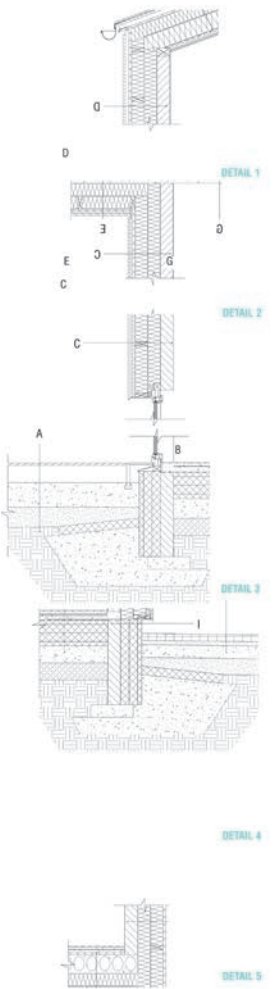
Tallinn University of Technology

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• Fix 3 concrete block	150mm
• Air gap / counter battens	20mm
• Insulation Styrofoam 250 SL-A-N	100mm
• Insulation Styrofoam 250 SL-A-N	100mm
• Insulation Styrofoam 250 SL-A-N	50mm
• Stone plaster finish	





III PRIZE
ESTONIA
National Stage 2016



ALEKSANDRA
PAPUNOVA



INDREK
PALM

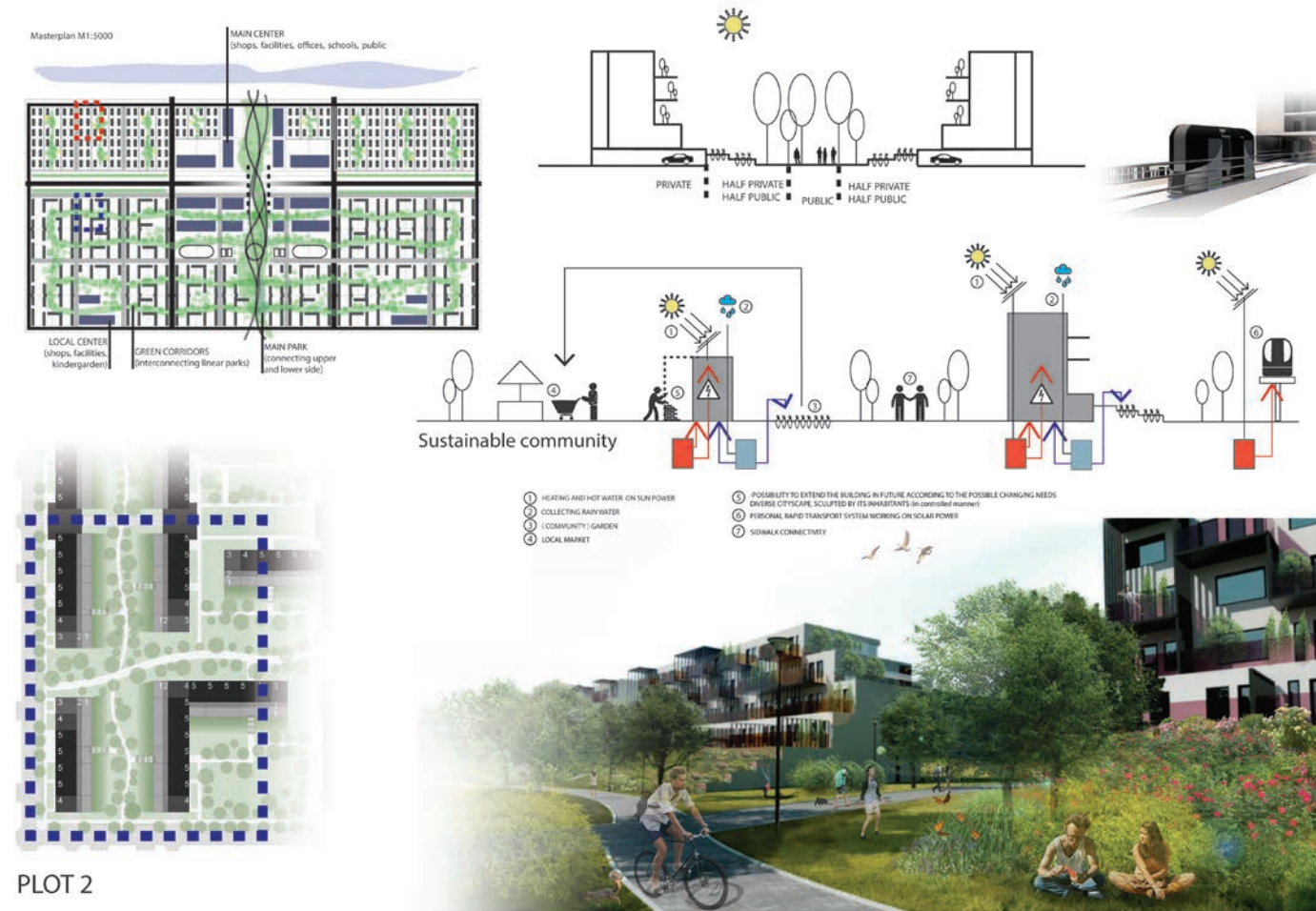
Tallinn University of Technology

16

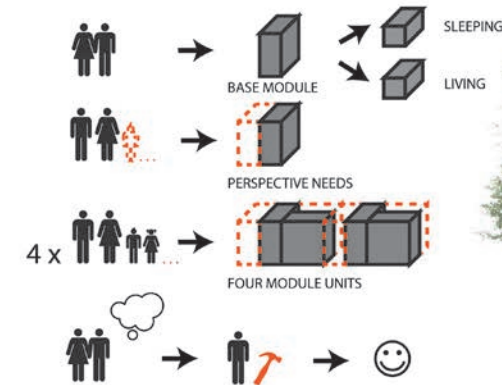
Community Development in Brest, Belarus

Minsk, Belarus

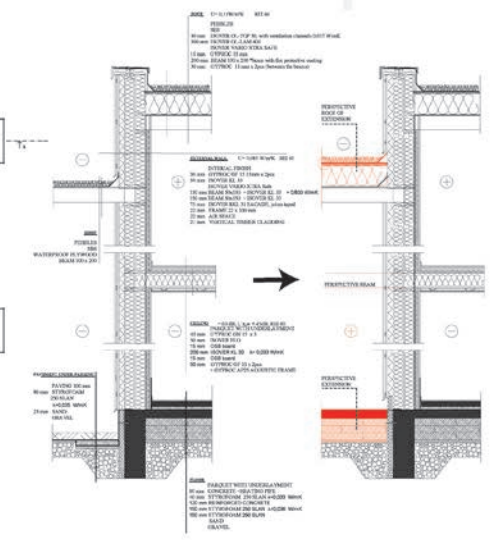
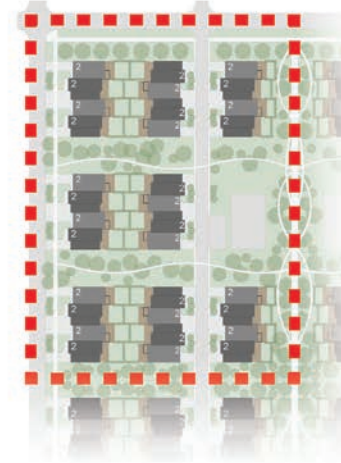




Concept



PLOT 1



Community Development in Brest, Belarus

Minsk, Belarus

PRIZE
FINLAND
National Stage 2016



ANTTI
TUURE

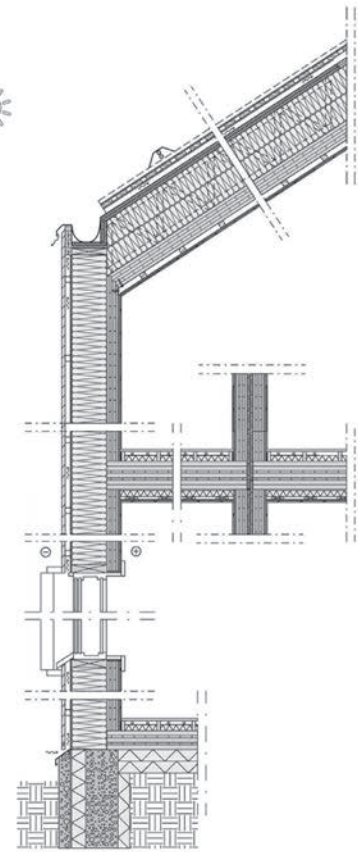
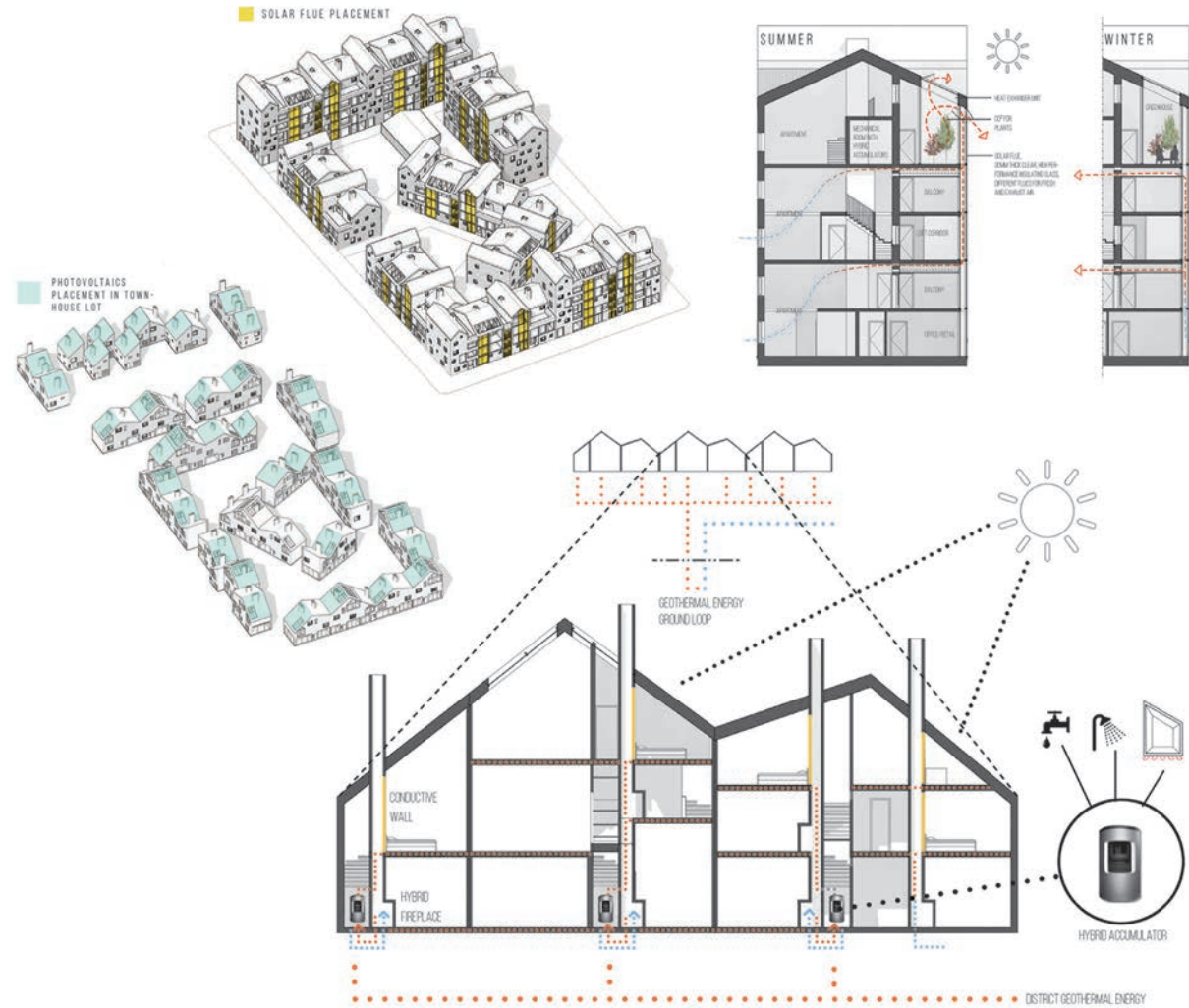
Tampere University

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Special award

ISOVER
Multi-Comfort House
Students Contest
International stage,
Minsk 2016



PRIZE
FINLAND
National Stage 2016



**AINO
LAMPINEN**

Oulu University



**LILJASTIINA
LUMINIITTY**

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Community Development in Brest, Belarus

Minsk, Belarus





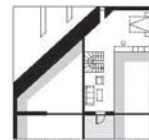
PLOT 1



GROUND FLOOR

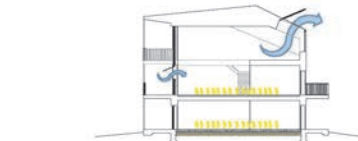


1ST FLOOR

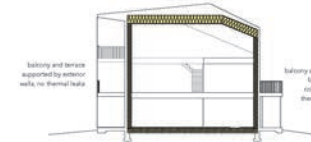


2ND FLOOR

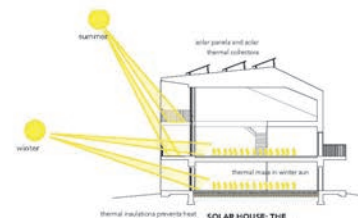
PLOT 2



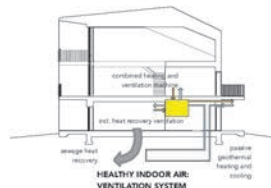
PASSIVE COOLING:
NATURALLY VENTILATED
TOP FLOOR / NIGHT-PURGE
VENTILATION



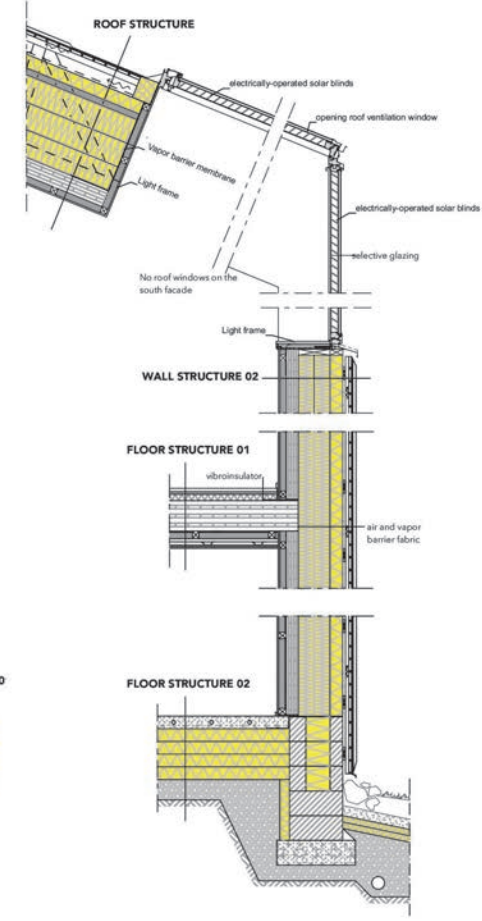
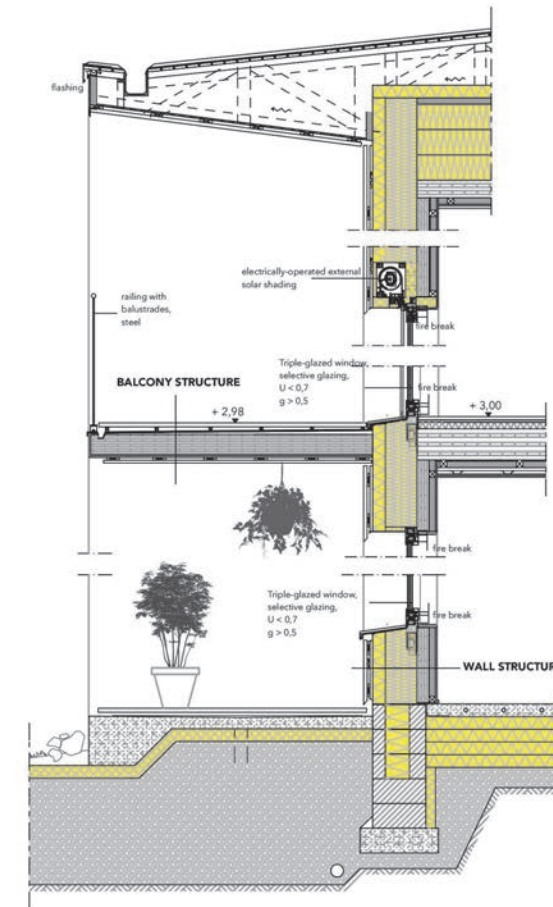
COMPACT SHAPE: AIR-TIGHT
& WELL INSULATED



SOLAR HOUSE: THE
ENERGY OF THE SUN



HEALTHY INDOOR AIR:
VENTILATION SYSTEM





III PRIZE
FINLAND
National Stage 2016



MARKO
RAISKI

Tampere University

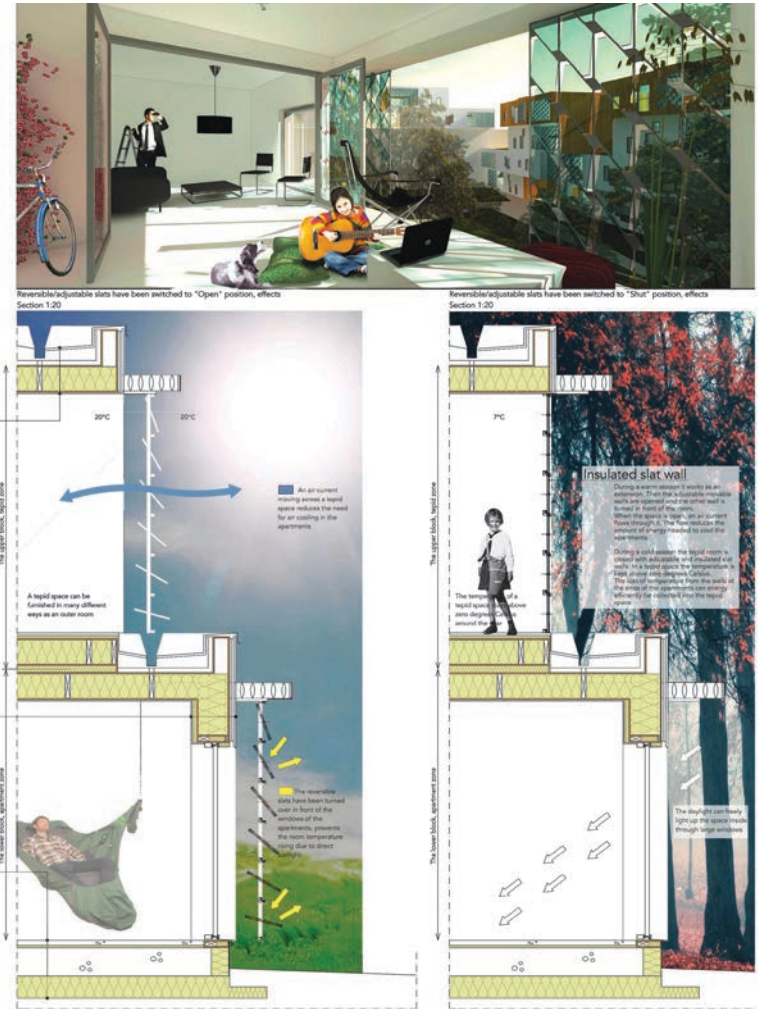
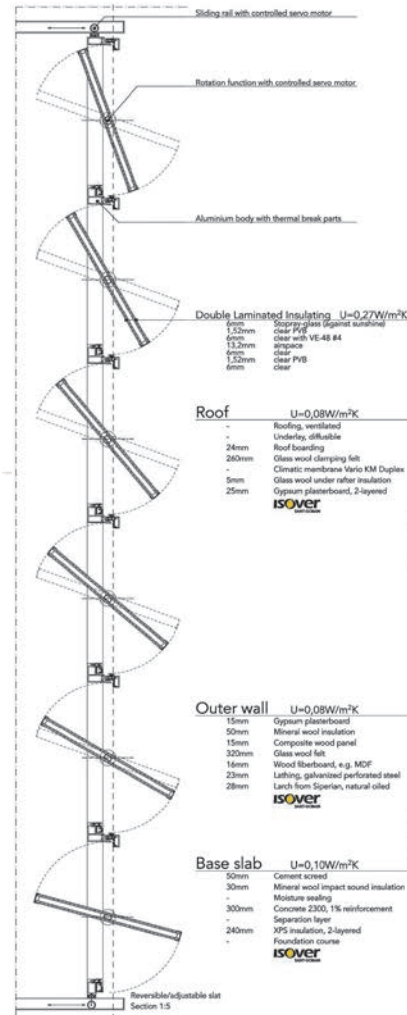
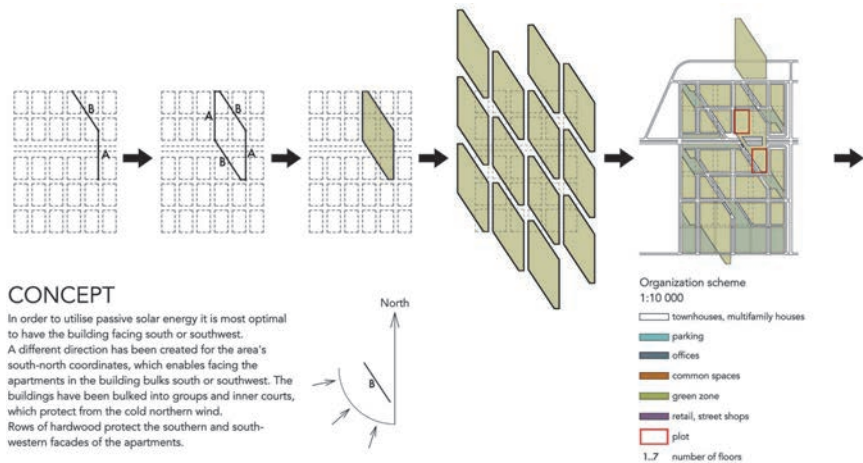
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Community Development in Brest, Belarus

Minsk, Belarus



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12th ISOVER Multi-Comfort House Students Contest 2016

PRIZE
FRANCE
National Stage 2016



**ADRIEN
RENBORN**



**ELAINE
BOUCHARD
DÉTRÉ**

Ecole Nationale Supérieure d'Architecture de Paris Malaquais

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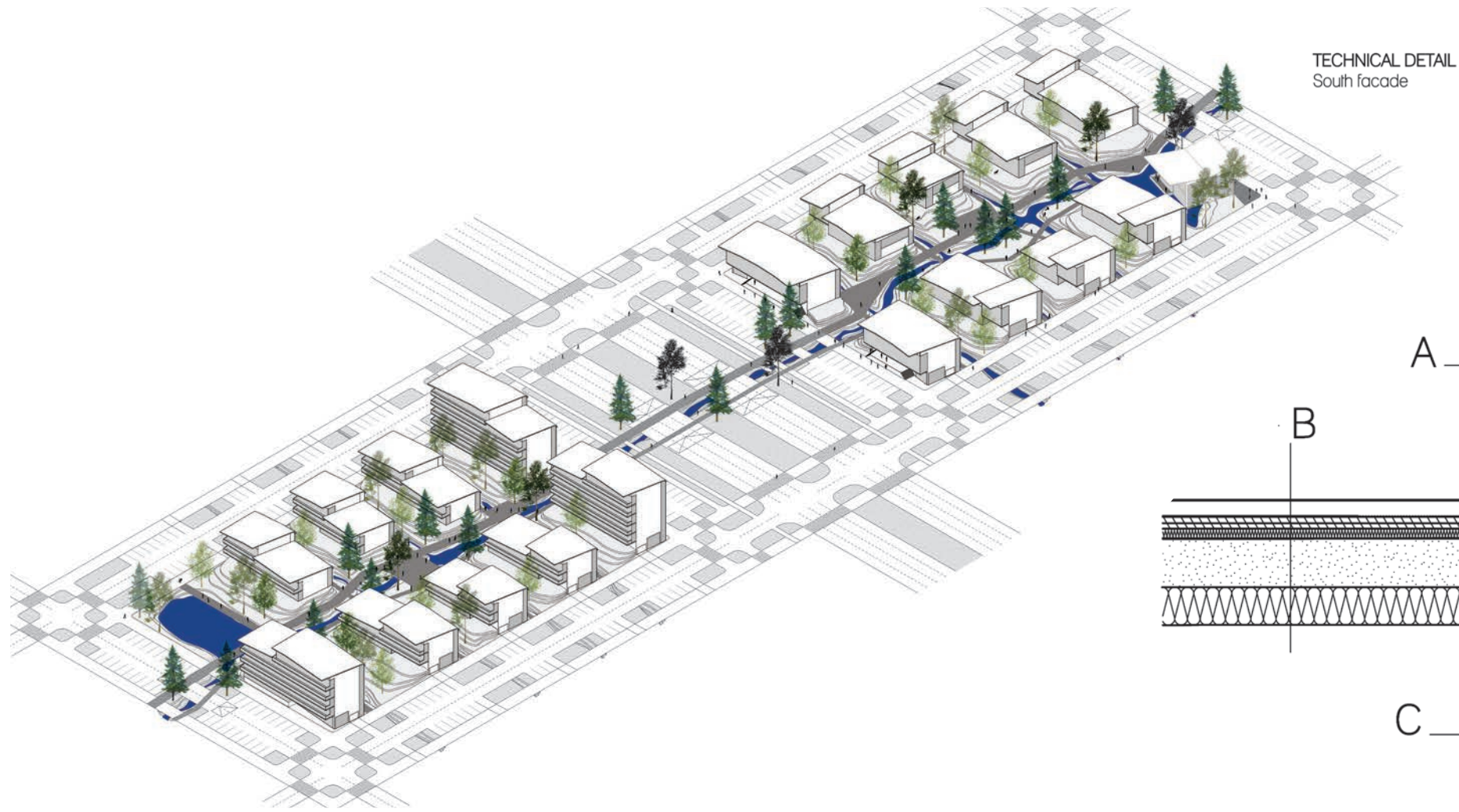
Community Development in Brest, Belarus

Minsk, Belarus

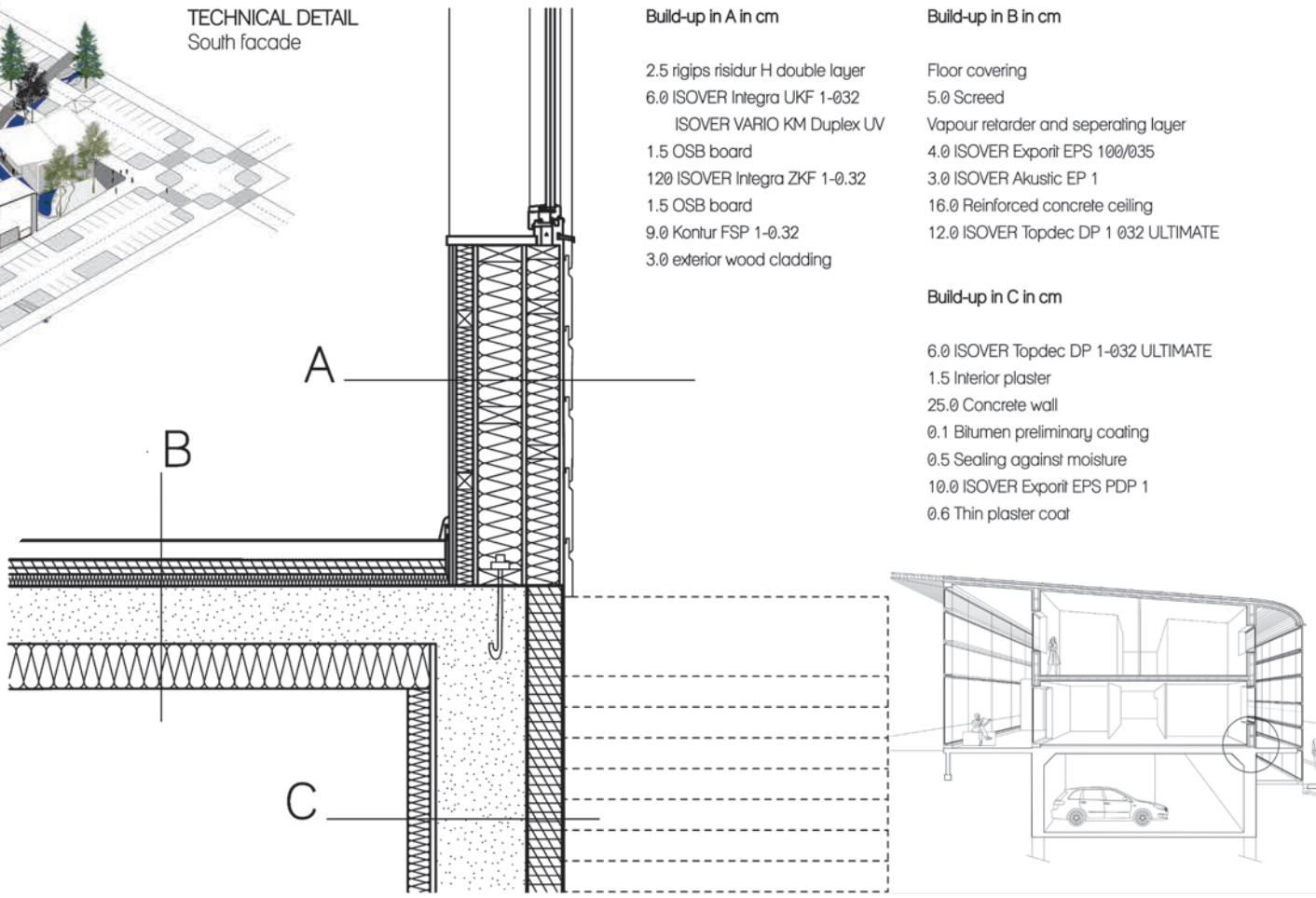


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ISOVER
SAINT-GOBAIN



TECHNICAL DETAIL
South facade



II PRIZE
FRANCE
National Stage 2016



**HUGUES
AZAMBRE**



**CHARLES
BUGNY**

Ecole Nationale Supérieure d'Architecture de Paris Malaquais

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Community Development in Brest, Belarus

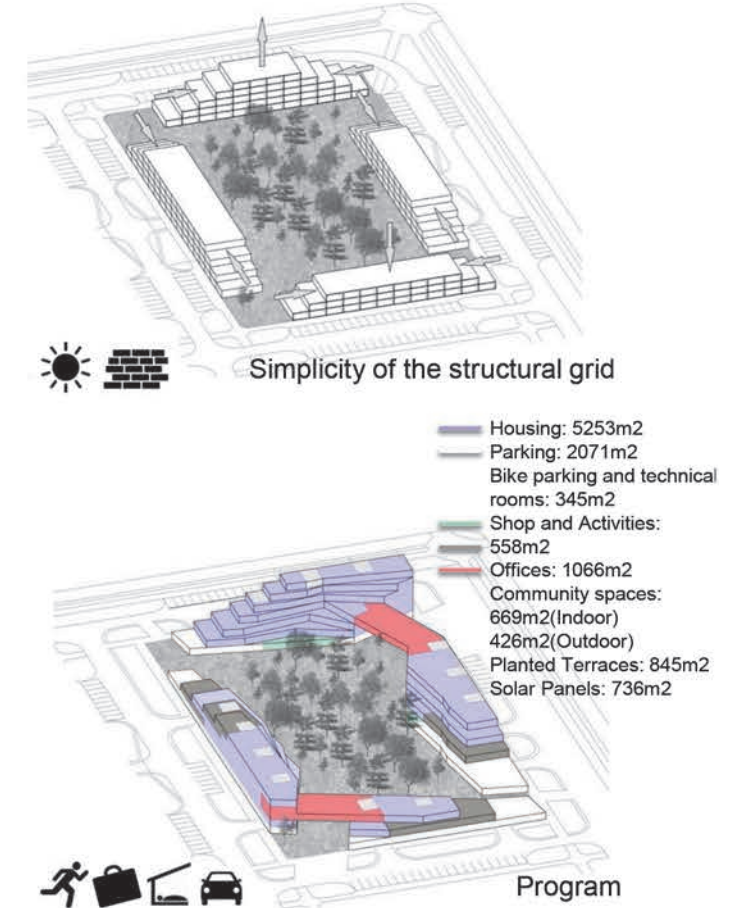
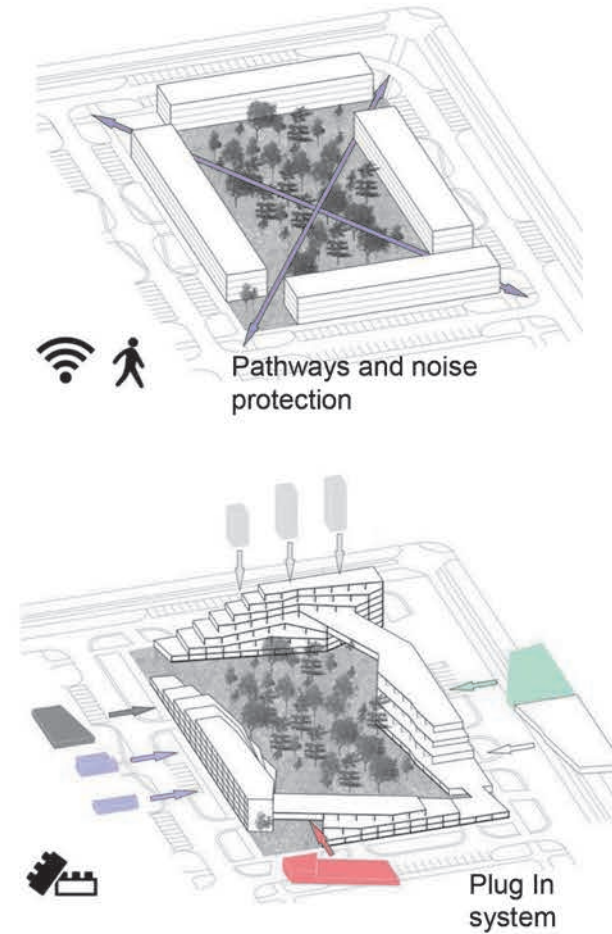
Minsk, Belarus



Master Plan



Process





III PRIZE
FRANCE
National Stage 2016



ERIC
DORLEAC



THOMAS
MAGNAVAL

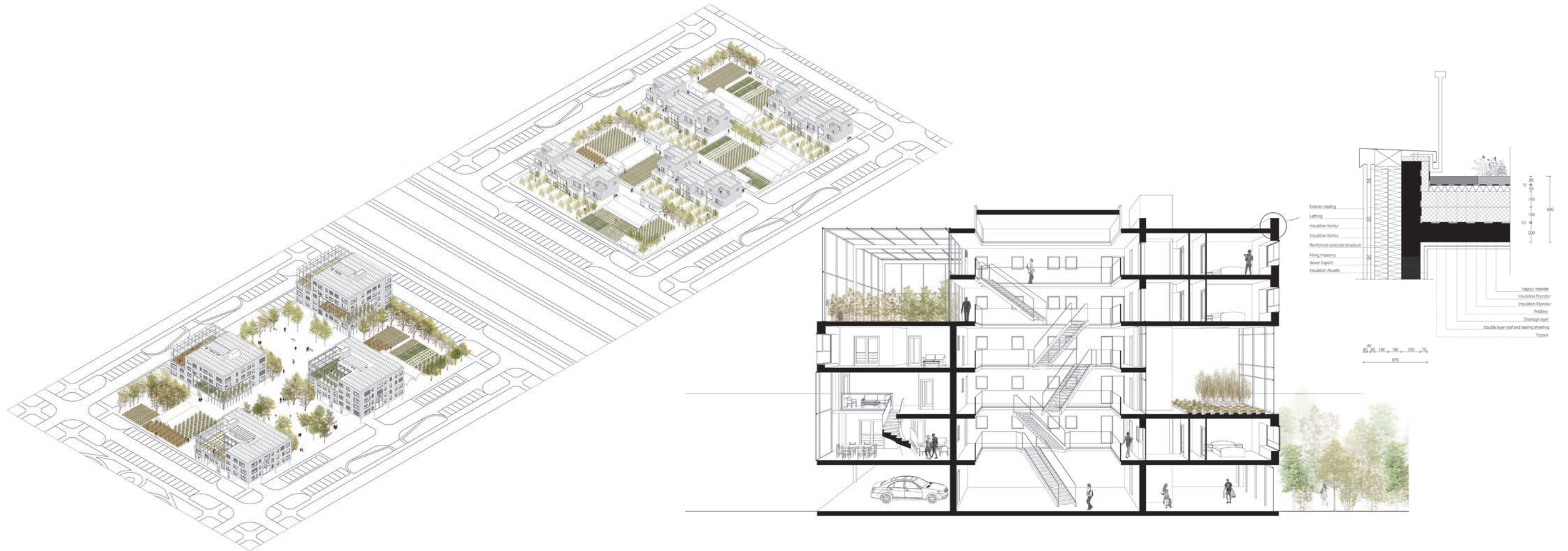
Ecole Nationale Supérieure d'Architecture de Paris Malaquais

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Community Development in Brest, Belarus

Minsk, Belarus







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PRIZE
GERMANY
National Stage 2016



ANDREJ
ALLERDINGS

RUDI GLASS
FLIEHR JOHANNES

University of Applied Sciences

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Community Development in Brest, Belarus

Minsk, Belarus



ISOVER
SAINT-GOBAIN



EAST-WEST VIEW



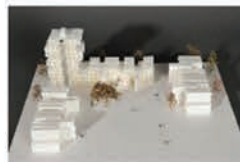
SOUTH-NORTH VIEW



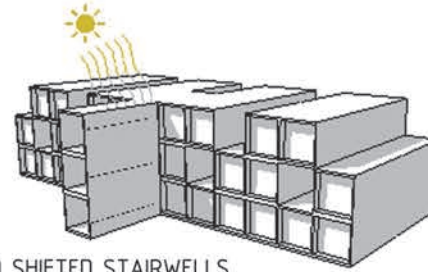
EAST-WEST SECTION



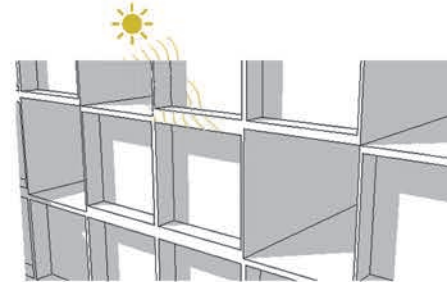
SOUTH-NORTH SECTION



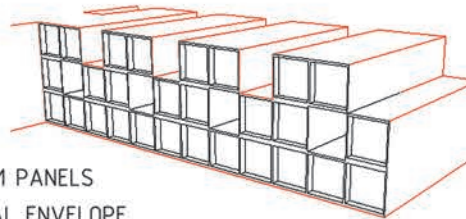
MODEL PICTURES



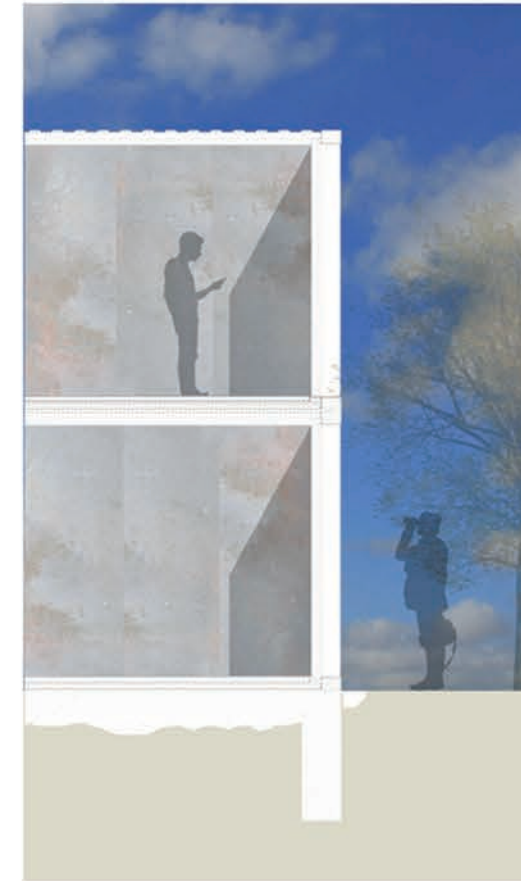
FORWARD SHIFTED STAIRWELLS
FOR NATURAL SHADING



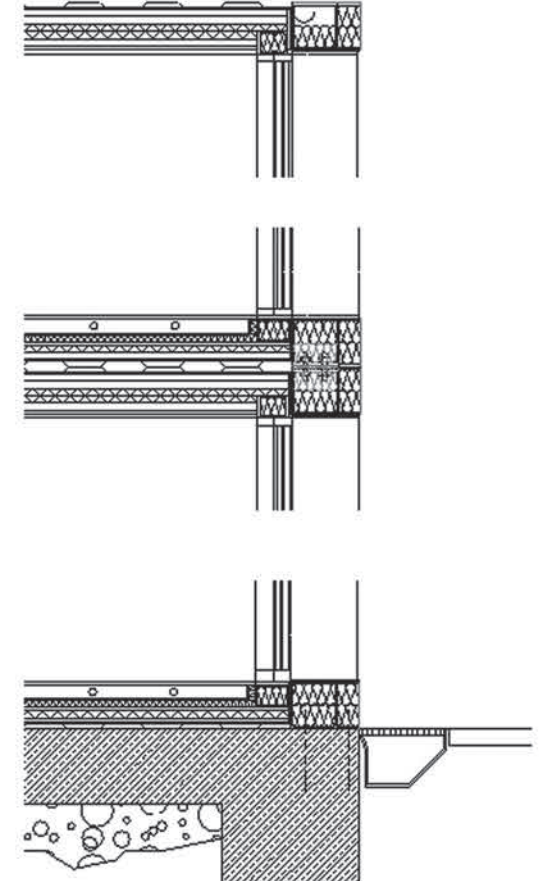
NATURAL SHADING



VACUUM PANELS
THERMAL ENVELOPE



DETAIL SECTION



PRIZE
GERMANY
National Stage 2016



**LUCAS
REICHL**



**MAIK
KESSLER**

24

University of Architecture, Civil Engineering and Geodesy Erfurt

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Community Development in Brest, Belarus

Minsk, Belarus





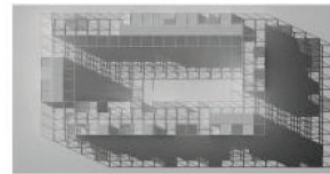
SUSTAINABILITY

Target of Enturfes is advertised by ISOVER Criteria , a Multi Comfort House develop , operate and develop . If possible, short construction period and an enormously high demands on the



CRADLE TO CRADLE

Energetic behavior of the structure are required in Belarus . Our answer is a pre-finished wood building from recources on site , which is just brought to the site in time and the passive house standard



DESIGN FREEDOM

fulfilled . The modules work alone for itself or multipliezert . There are nine different floor plans that always fit into a grid and are freely positionable .



INNER PEACE

One of Hauptziele it was all the materials used are to be able to recycle ... from cradle to cradle. Major contributions to the mass verwebdeten plants belonging to the building subtzanz.

Baubotanik was a maßgeblicherEntwurfs approach. The low CO2 Bilanz of the structure and the proportion of gray energy are here by again significantly verbessert.Die Lebends quality of residents increases additionally.

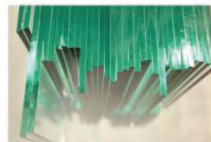
WOOD



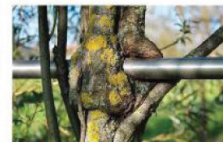
STEEL



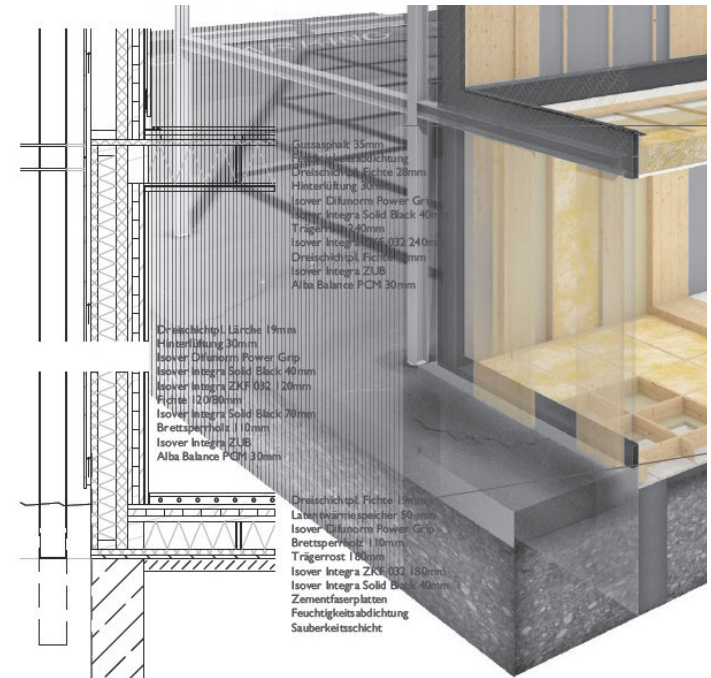
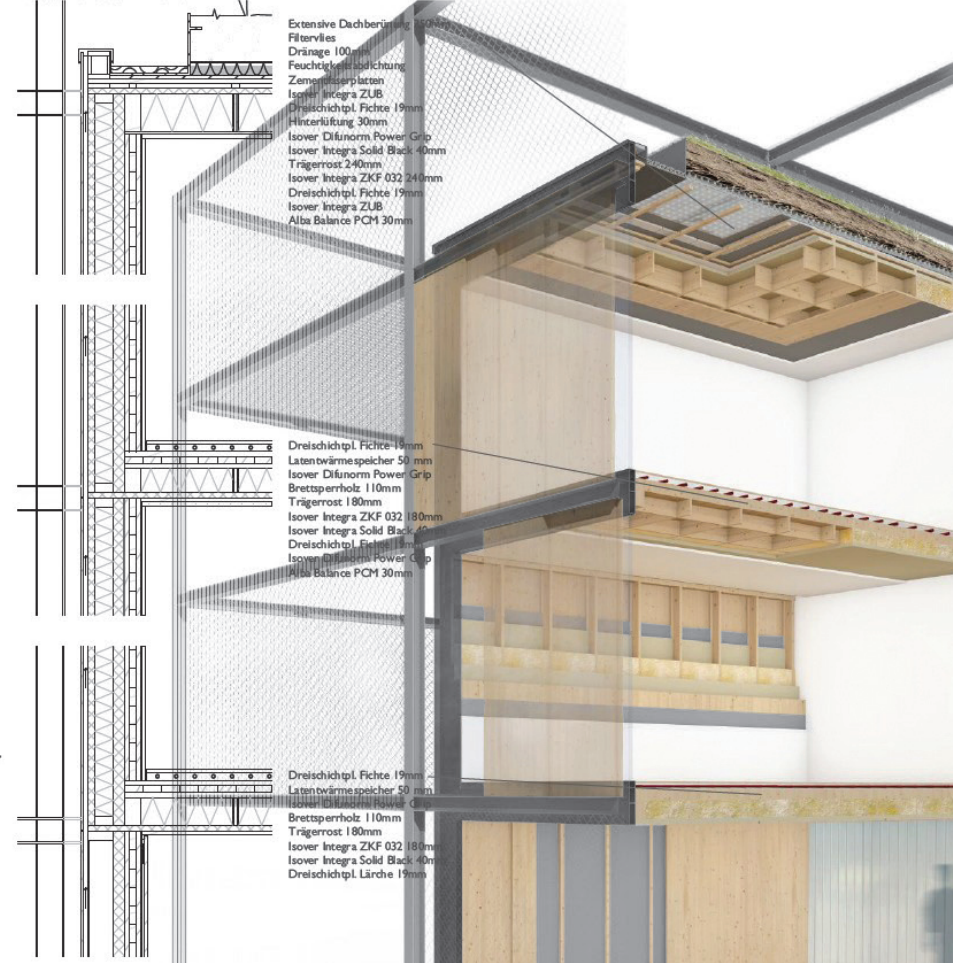
GLASS



BUILDING GREEN



Facade cut M1:20



PRIZE
KAZAKHSTAN
National Stage 2016



KARIMA
AMANKELDIEYEVA



TATYANA
ANDRIYASHINA



VALERIYA
CHZHEN

KazGASA

25

Community Development in Brest, Belarus

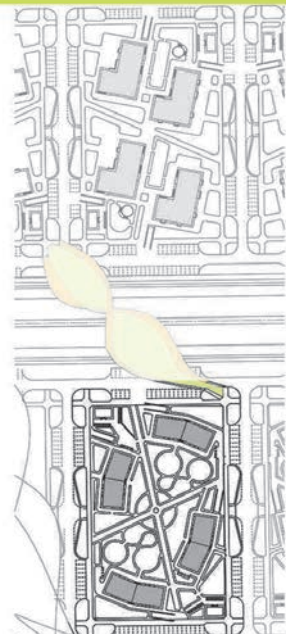
Minsk, Belarus



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Multifamily houses masterplan



- playground for children
- sidewalks/bicycle runways
- bicycle parking with bike sharing station integration
- guest parking
- waste collection points



Multi-Comfort Designer: calculation for a multifamily houses

A. PROJECT DATA

Object: Multifamily houses
Climate zone: brest
Construction: New building
Building Type: Residential
Usage: For living
Design Temperature: 22.00°C

B. AREA INPUT

Sum of living area: 677.40 m²
Sum of Heated Space Volume: 158220 m³
V/A Ratio: 2.34
Sum of Thermal Envelope: 1552.53 m²

C. ENVELOPE- OPAQUE ELEMENTS (Average U-Values)

Pitched roof: 0.11
Wall against air: 0.11
Slab against unheated cellar: 0.10
DENVELOPE- WINDOWS AND DOORS (Average U-Values)
Windows: 0.73
Doors: 0.80
E. QUALITY
Airtightness rate: 0.60
Thermal bridge Free: Yes
F. MEAN SHADING FACTORS
67°: 1.00

150°: 0.22
167°: 0.22
257°: 1.00

OVERHEATING PARAMETERS
Kind of Construction: Massive Construction
Max. admitted interior temperature: 25
SUMMER VENTILATION STRATEGY
Summer Air Exchange Rate
Natural Ventilation Losses 0.2
Mechanical Ventilation Losses 0.4

H. CALCULATIONS

Transmission Heat Losses: 22770.57 kWh/a
Ventilation Heat Losses: 3091.57 kWh/a
Total Heat Losses: 26762.14 kWh/a
Internal Heat Gains: 74427.3 kWh/a
Available Solar Heat Gains: 10336.99 kWh/a
Total Heat Gains: 16934.70 kWh/a
Annual Heat Demand: 9827.44 kWh/a



Specific Annual Heat&Cooling Demand: 14.51 kWh/(m²a)

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ALINA
I-KHI-DE

EKSTU

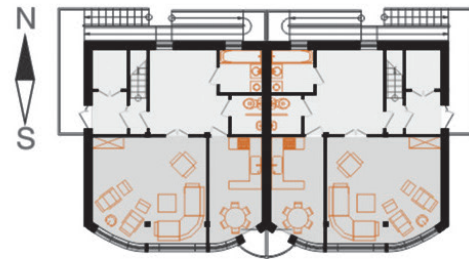
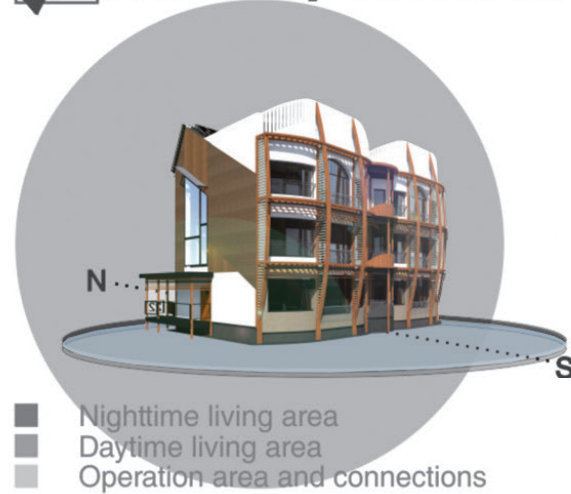
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Minsk, Belarus



✓ THERMAL COMFORT / VENTILATION STRATEGY



Ground floor plan

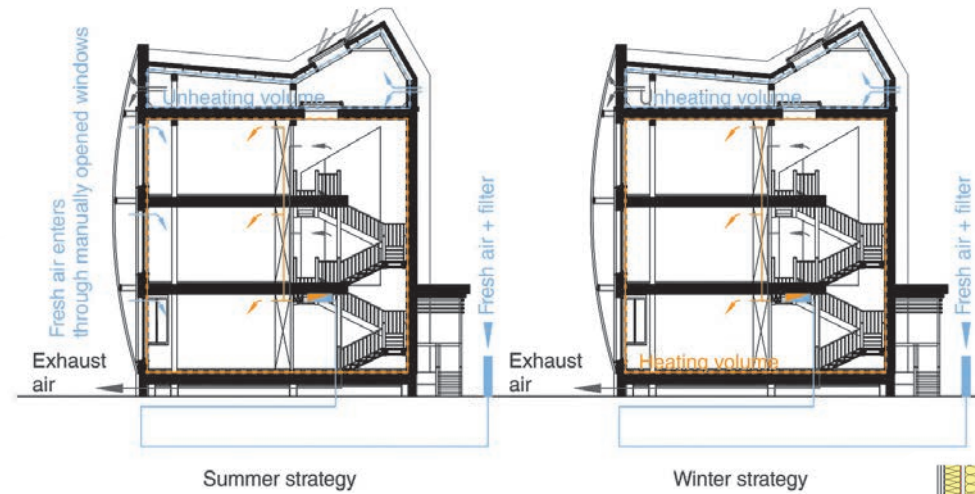


1st floor plan

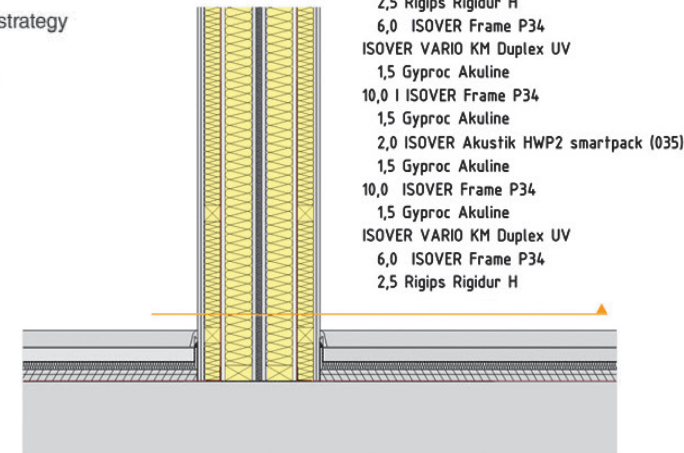
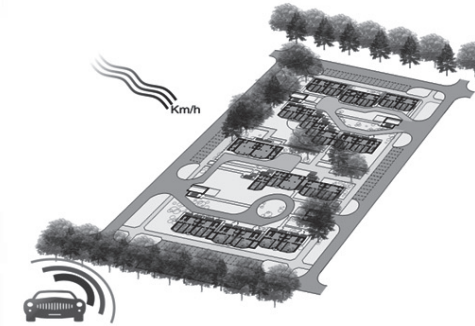


2nd floor plan

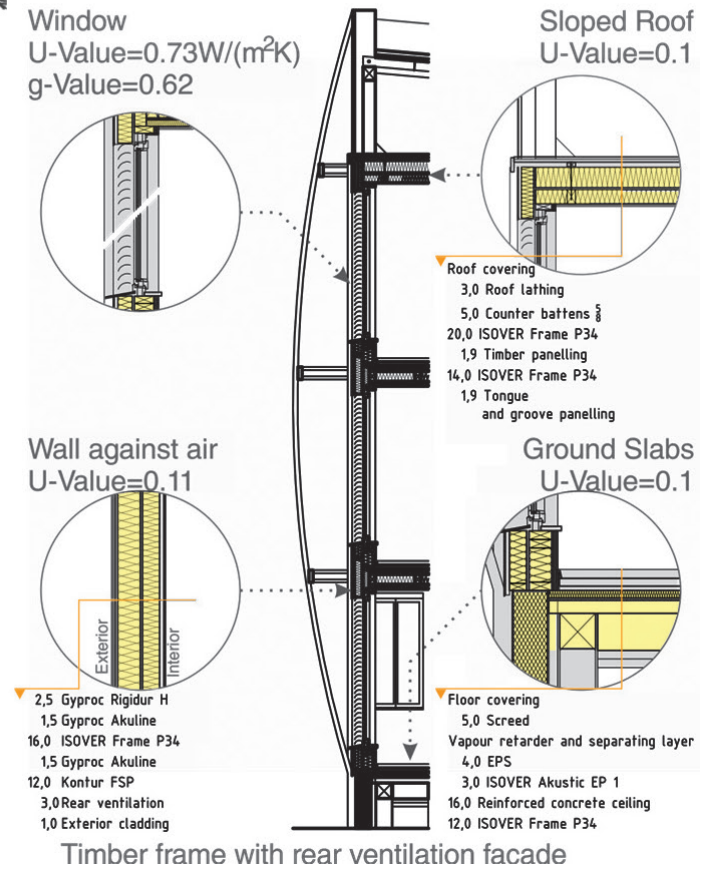
✓ THERMAL COMFORT / VENTILATION STRATEGY



Master plan solutions □
Architectural solutions ■
Constructional solutions ■



✓ THERMAL COMFORT / VENTILATION STRATEGY



III PRIZE
KAZAKHSTAN
National Stage 2016



YEKATERINA
LEE

Almaty - KazNTU



YERASSYL
AIDAR

27

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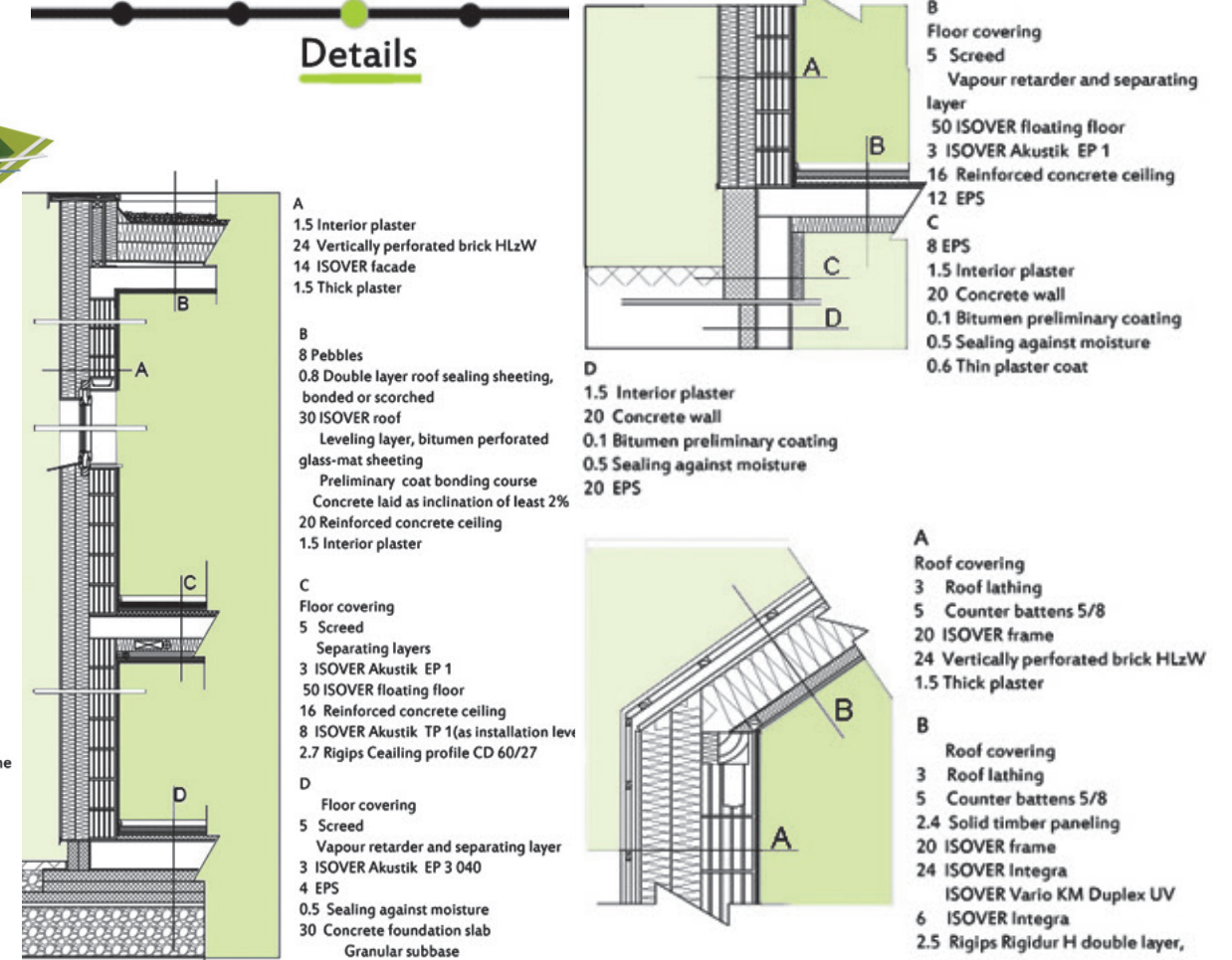
Minsk, Belarus





- streets
- footbridge
- sidewalks, bikeways
- parks
- Mukhavets river with recreation zone
- multi-family houses
- townhouses

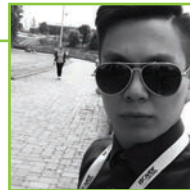
Details



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**ALISHER
SADYRBEK UULU**



**BEKZHAN
TURDUBEKOV**

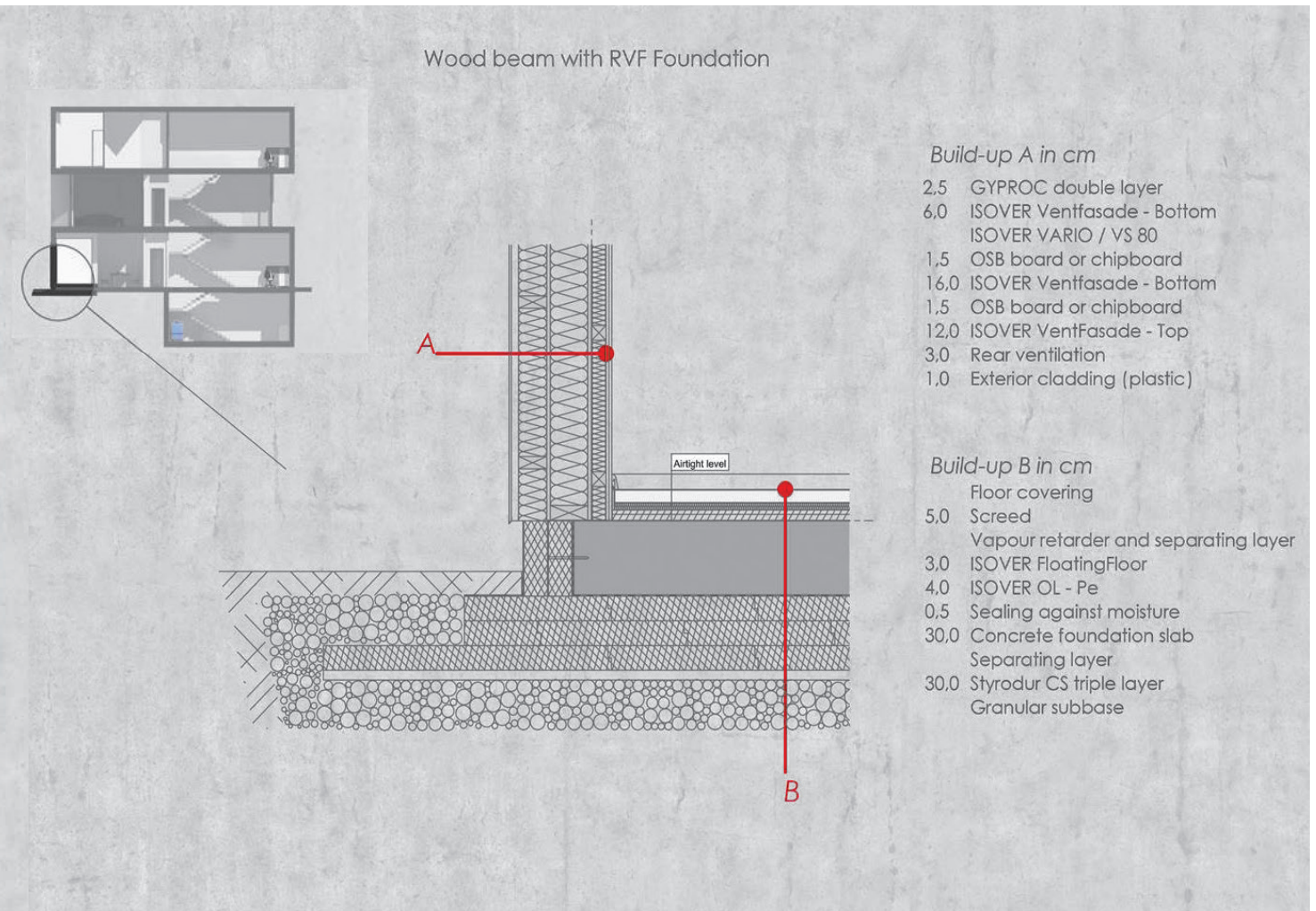
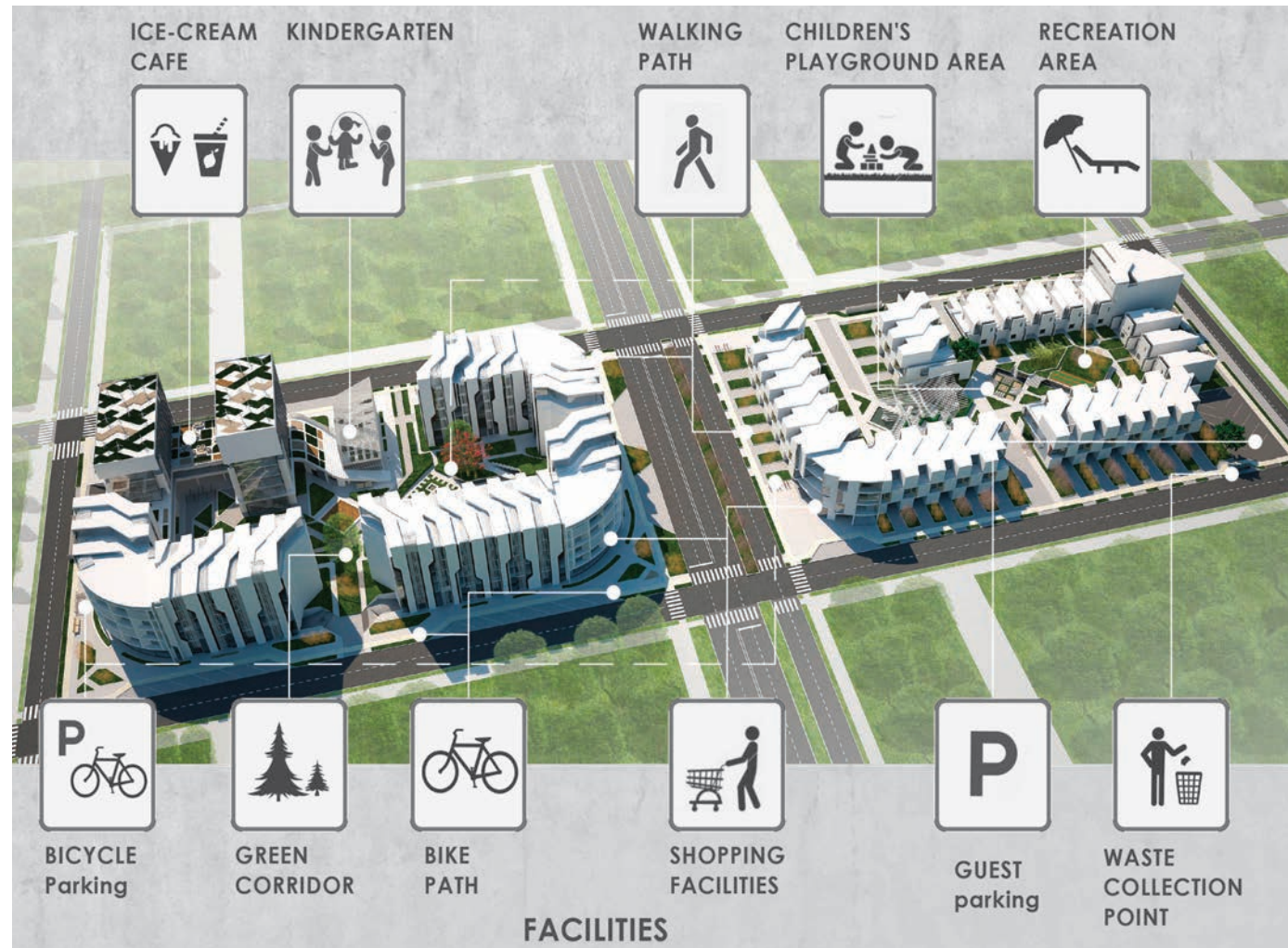
KGUSTA

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Minsk, Belarus





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AKTILEK
KANATBEKOV

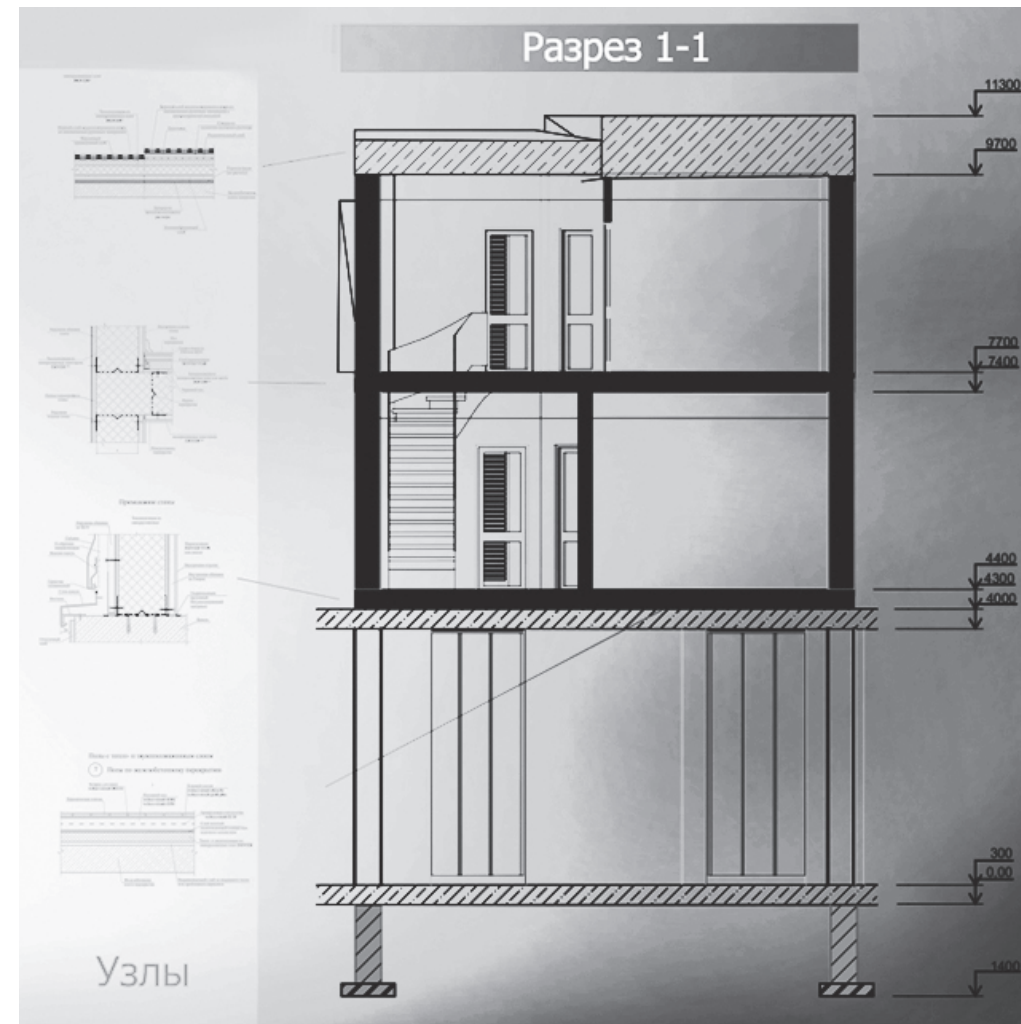
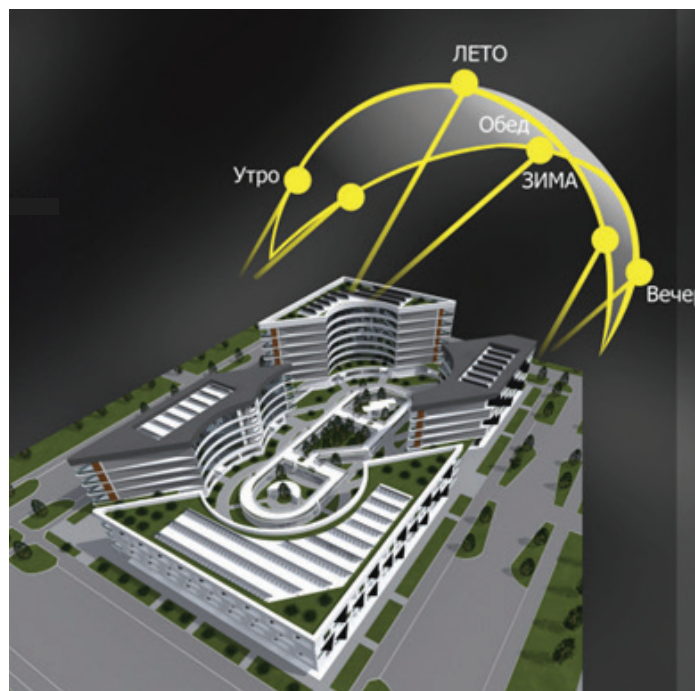
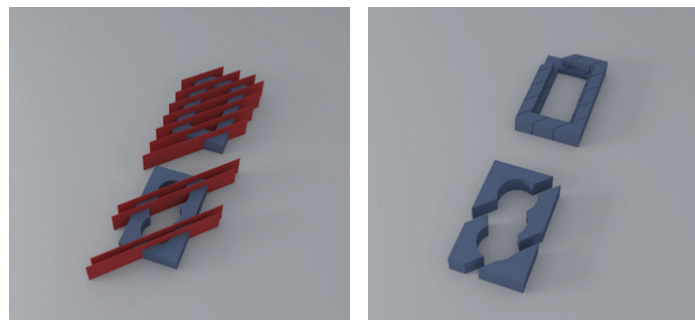
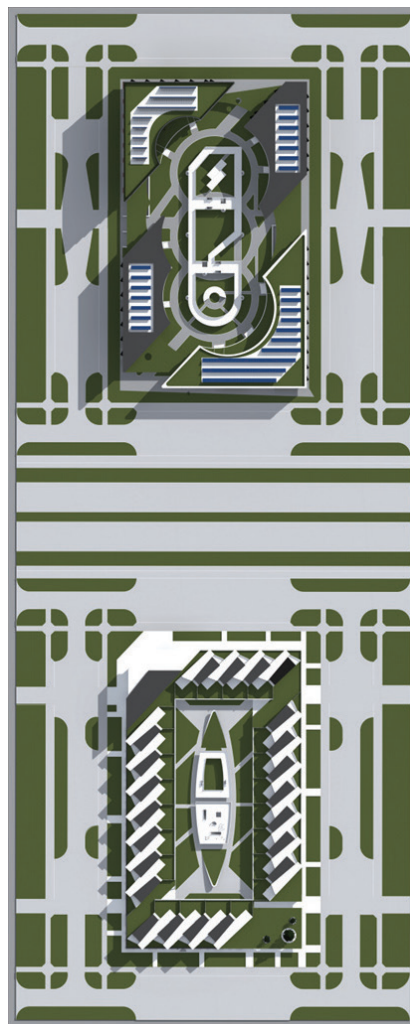
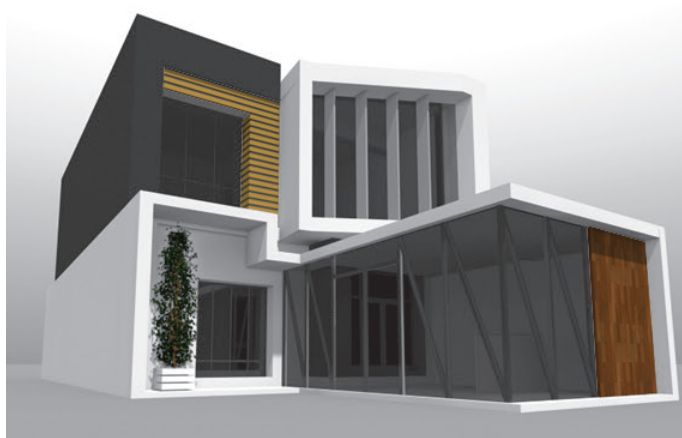
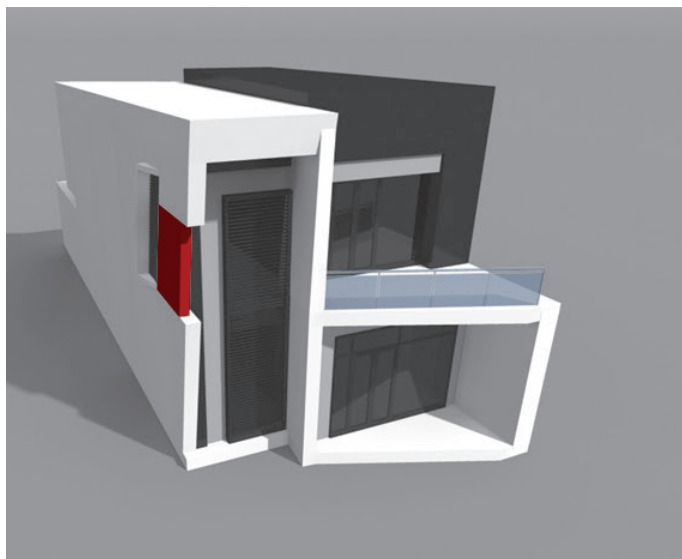
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Minsk, Belarus





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KYRGYZSTAN
National Stage 2016



YRYSKELDI
KASYMKULOV

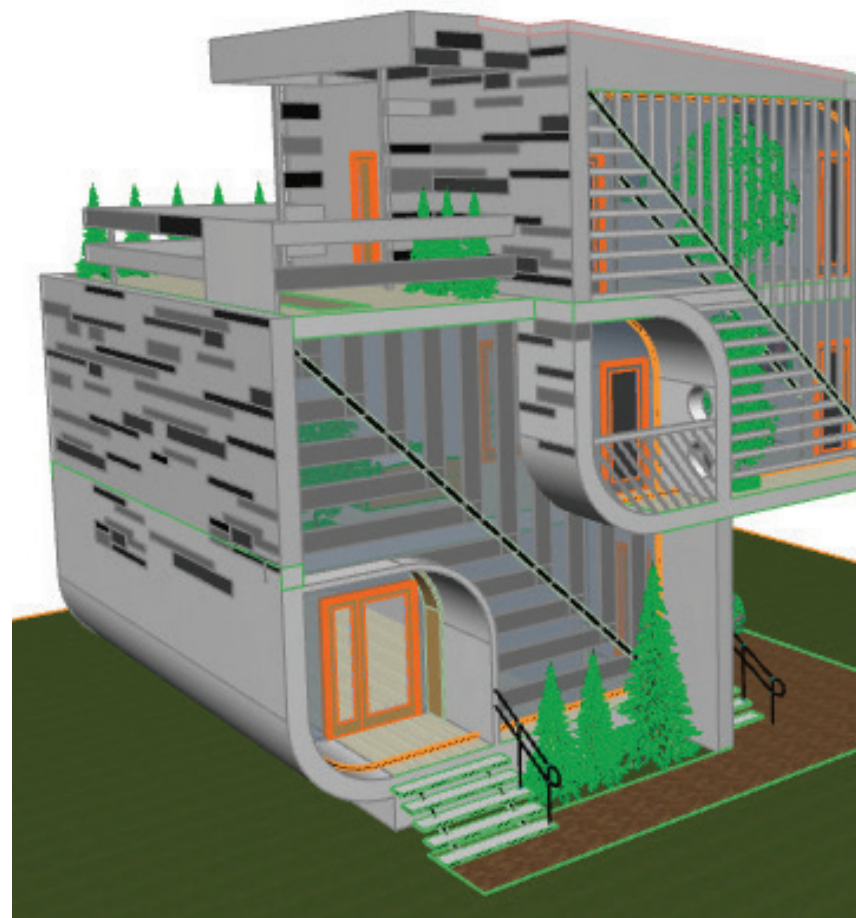
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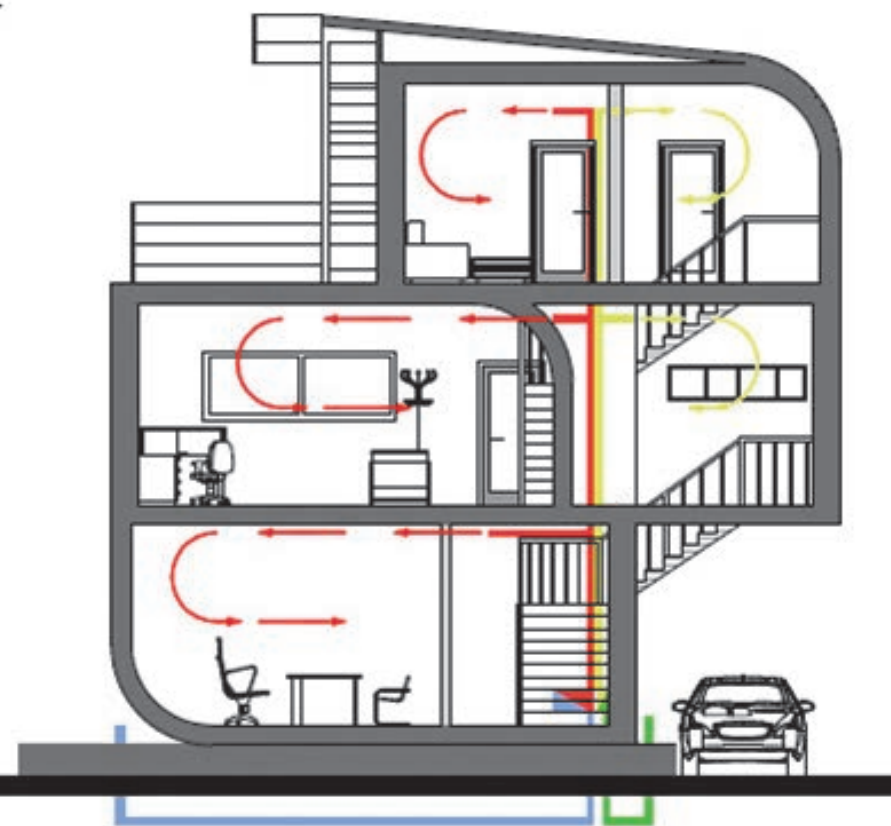
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Minsk, Belarus





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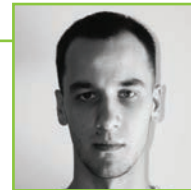
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LATVIA
National Stage 2016



**EGĪLS
MARKUS**



**SIDHARDS
JĀNIS LIBERS**



**VIGO
KRONBERGS**

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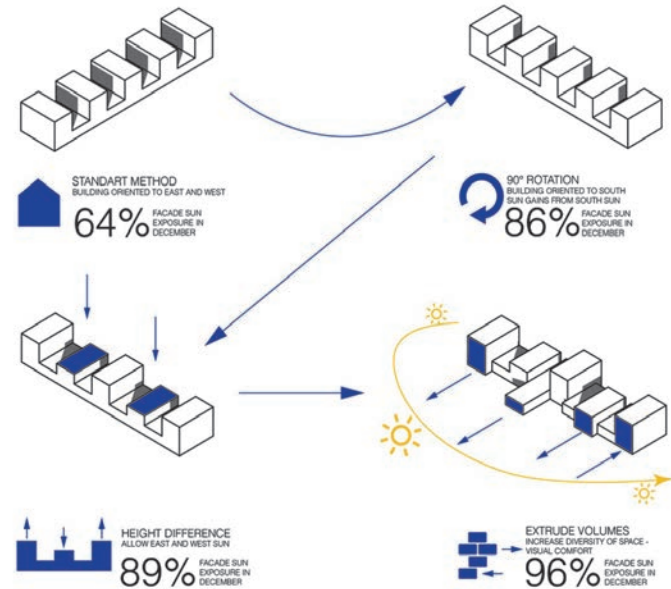
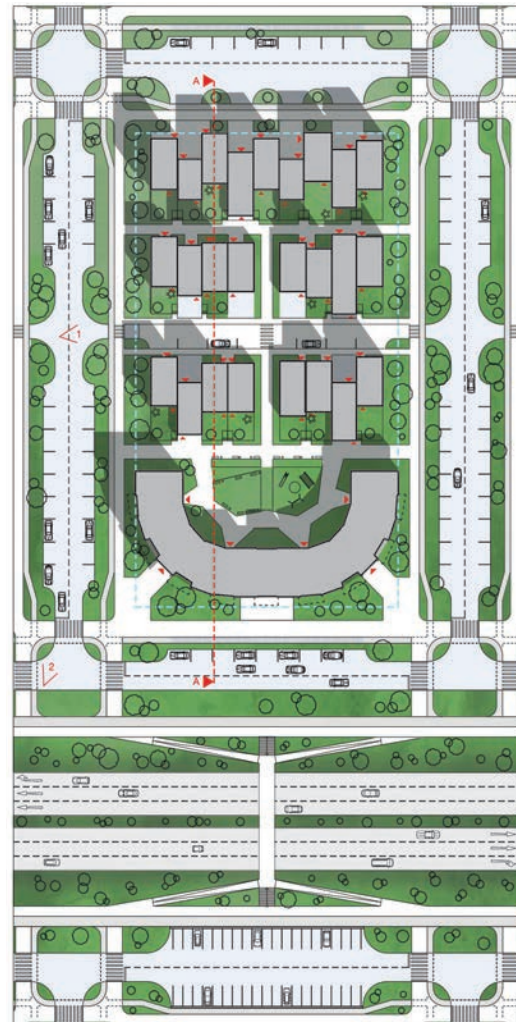
Riga Technical University FAUP

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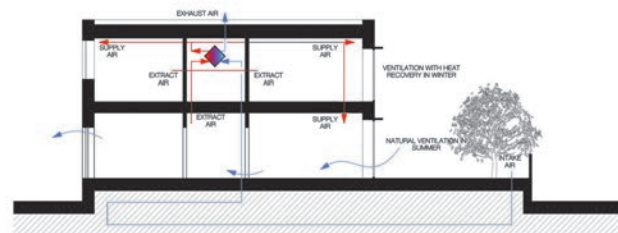
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Minsk, Belarus

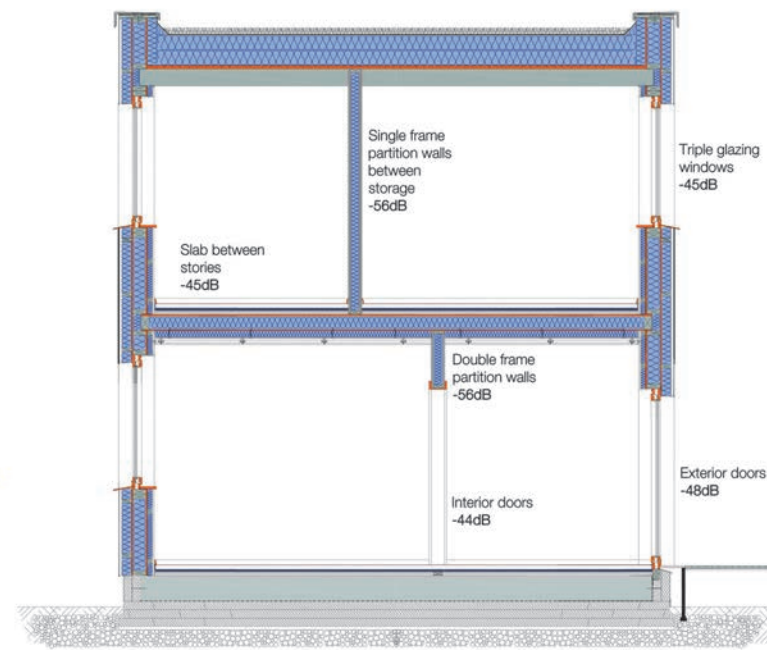
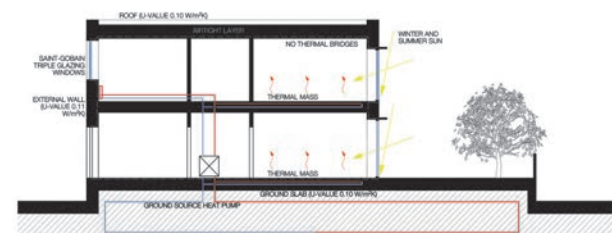




VENTILATION



THERMAL COMFORT



ROOF (U-Value: 0.10 W/m²K)

80 mm	Pebbles
8 mm	Double layer roof and sealing sheeting, bonded or scorched
180 mm	ISOVER Metac FLP 1 Duratec
180 mm	ISOVER Metac FLP 1 Duratec
180 mm	ISOVER Metac DSB, Vapour retardant sheeting for flat roofs
40 mm	Fire-resistant panelling on load-bearing structure at inclination

EXTERNAL WALL (U-Value: 0.11 W/m²K)

25 mm	Rigips Rigidur H double layer, each layer 12.5mm
60 mm	ISOVER Integra UKF 1-032 (wood 6/6 e=40cm, 13% wp)
15 mm	ISOVER VARIO KM Duplex UV
160 mm	OSB board or chipboard
15 mm	ISOVER Integra ZKF 1-032 (wood 6/16 e=62.5cm, 14%wp)
15 mm	OSB board or chipboard
120 mm	Kontur FSP 1-032 Easy Fix 120 (wood 6/12 e=60cm, 12%wp)
30 mm	Rear ventilation
10 mm	Exterior cladding (e.g. wood, metal, plastic, stone)

SLAB BETWEEN STORIES (R_w=48dB)

50 mm	Floor covering
30 mm	Scorched
40 mm	ISOVER Akustik EP 3 040
19 mm	ISOVER Export EPS 100/035 as compensation for height of tube
160 mm	OSB board or chipboard
15 mm	ISOVER Integra ZKF 1-032 (solid wood beams 10/16, e=80cm, 11% wp)
80 mm	OSB board or chipboard
27 mm	Installation level with ISOVER Akustik TP 1 (glass wool, WLG 040)
27 mm	Rigips Ceiling profile CD 60/27 as basic profile
27 mm	Rigips Ceiling profile CD 60/27 as supporting profile
25 mm	Rigips Rigidur H double layer, each layer 12.5 mm

GROUND SLAB (U-Value (cut B): 0.10 W/m²K)

50 mm	Floor covering
30 mm	Scorched
30 mm	Vapour retarder and separating layer
40 mm	ISOVER Akustik EP 3 040
5 mm	ISOVER Export EPS 100/035 as compensation for height
300 mm	Sealing against moisture
100 mm	Concrete foundation slab
100 mm	Styrodur CS
100 mm	Styrodur CS
100 mm	Styrodur CS
100 mm	Granular subbase

II PRIZE
LATVIA
National Stage 2016



**DENISS
MARUHLĒNKO**



**MARTIN
COLON**



**OSKARS
BROKĀNS**

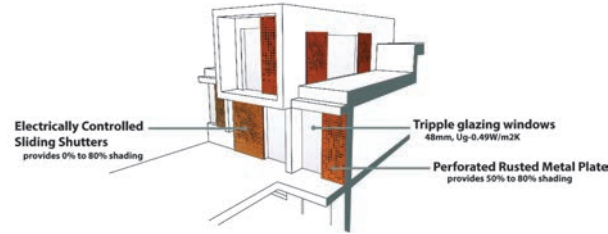
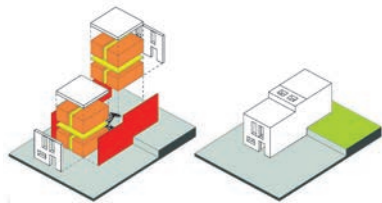
Riga Technical University FAUP

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Minsk, Belarus





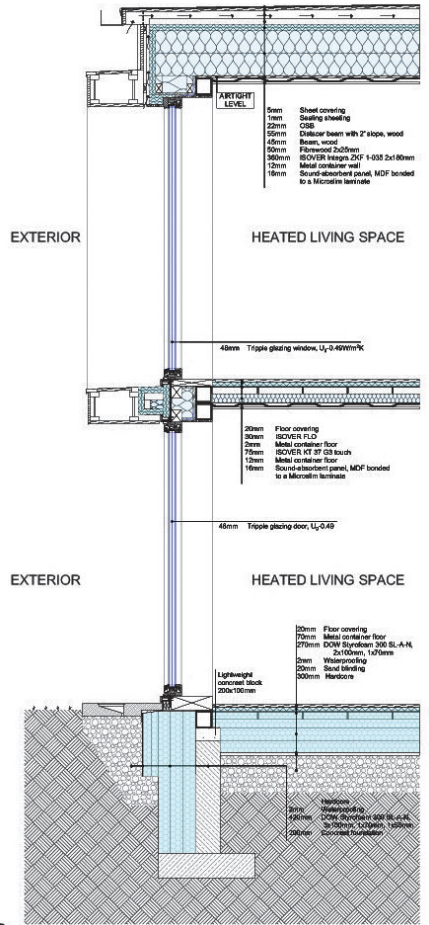
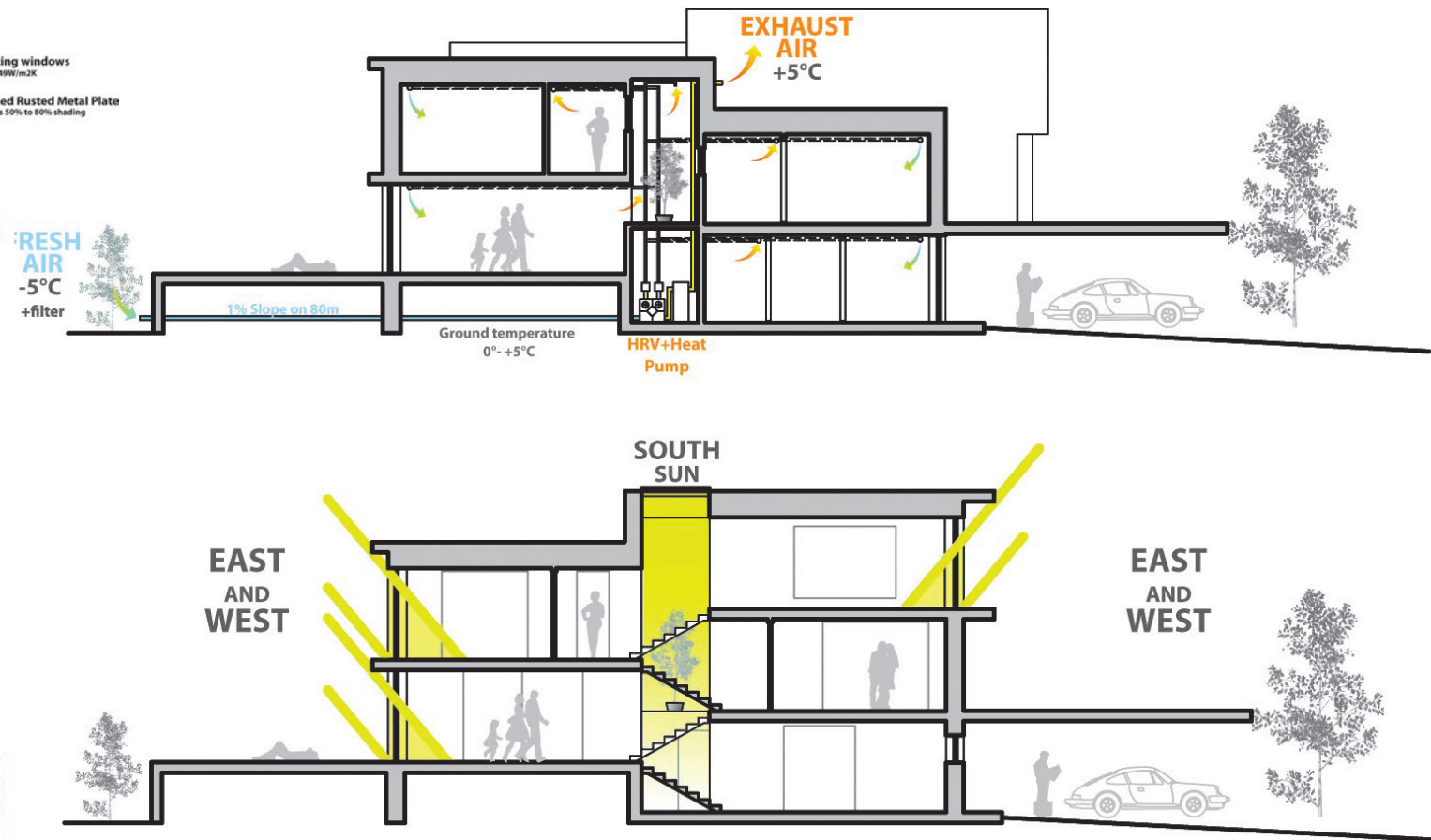
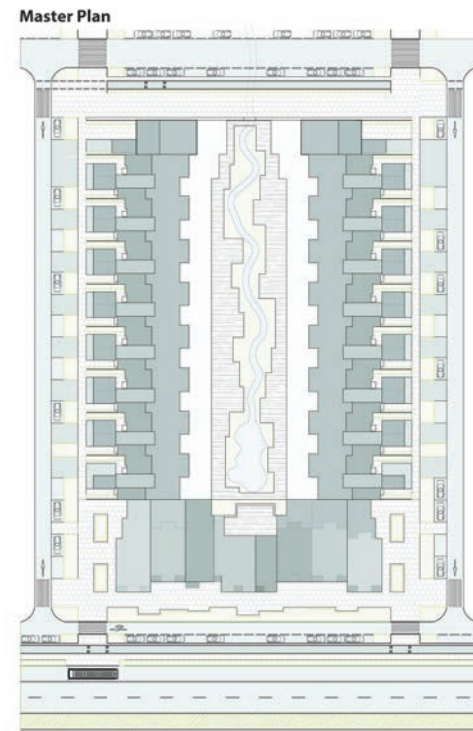
Ground Floor



First Floor



Second Floor





PRIZE
POLAND
National Stage 2016



**MAGDALENA
BARAN**



**MARTA
ŻWAKA**

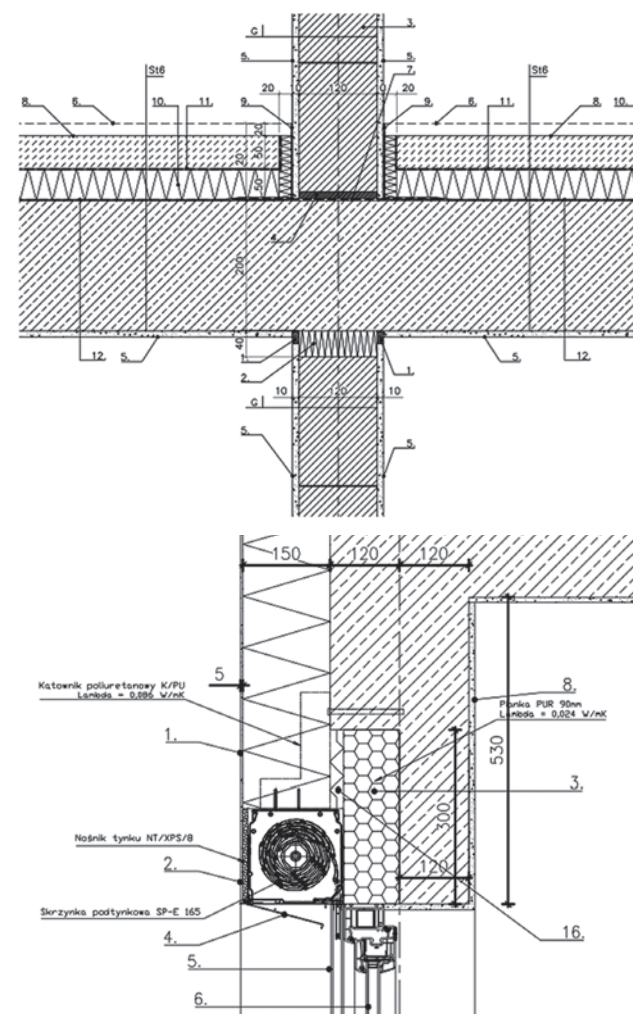
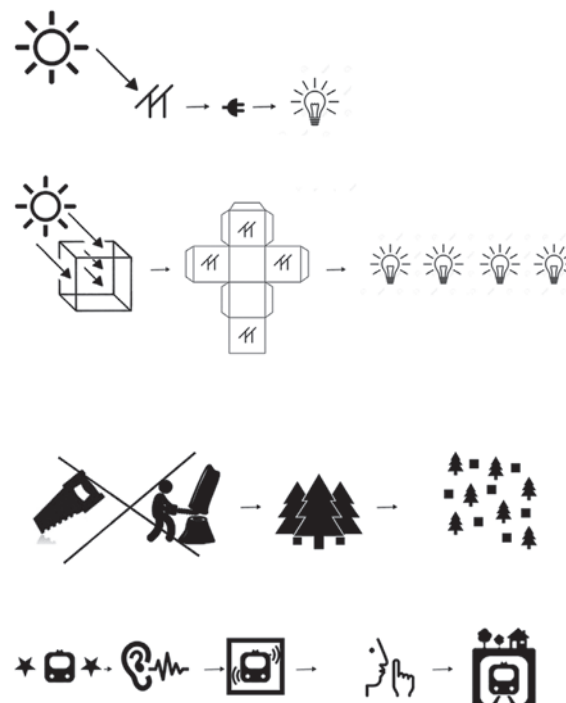
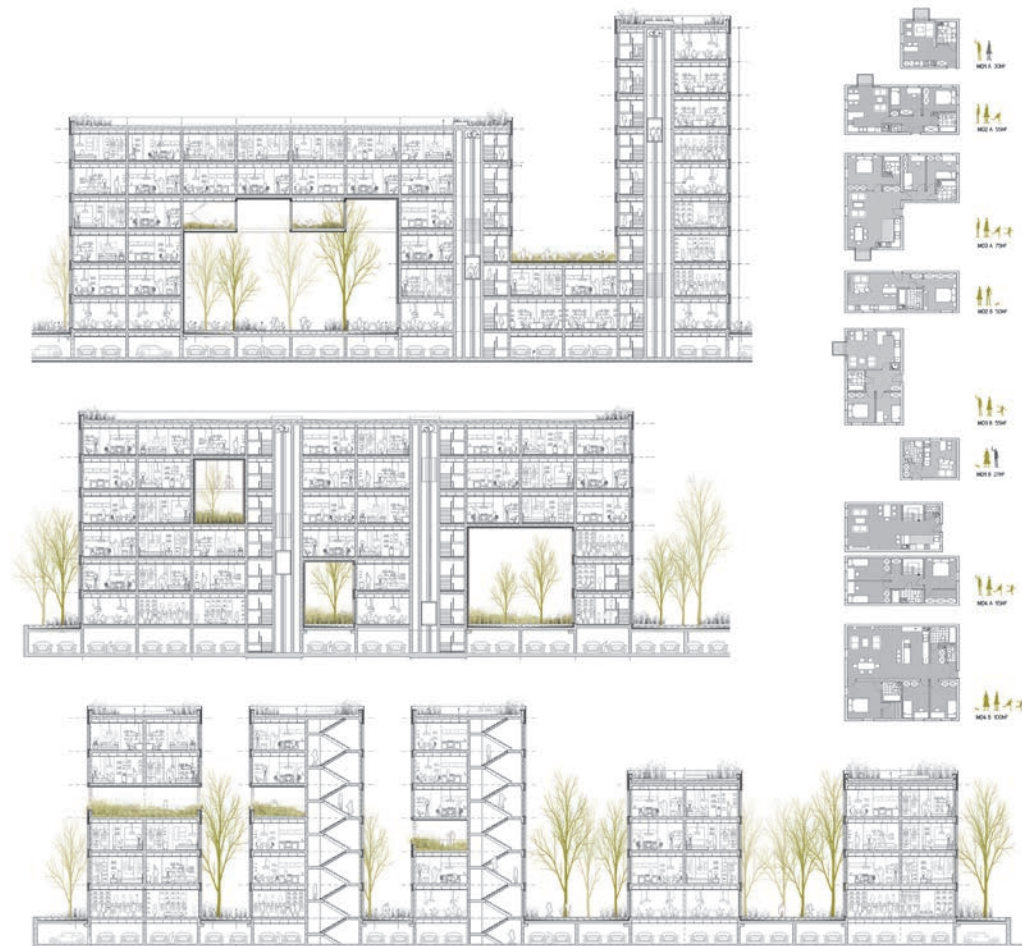
Silesian University of Technology

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Community Development in Brest, Belarus

Minsk, Belarus





OZNACZENIA

1	Deska elewacyjna- DIGONAL flurpol
2	Systemowa podtynkowa kaseta rolety okiennej SP-E 165
3	Warstwa wypełniająca pianka pur 90mm lambda 0,024 W/mK
4	Rewizja pozioma zewnętrzna kolor grafitowy RAL7024
5	Prowadnice boczne rolety pp53 oraz prowadnica pośrednia ppd79 kolor identycznym jak stolarka okienna szary RAL7001
6	Okno balkonowe tworzywowe kolor szary RAL7001
7	Maskownica czerpni kątowej malowana proszkowo kolor grafitowy RAL7024. Maskownica powinna przylegać do elewacji, bez szczelin na styku tynk/maskownica
8	Wykończenie wewnętrzne tynk gipsowy gr. 10mm
9	Otwór w murze Ø130 odległość od otworu okiennego 250 mm
10	Blacha aluminiowa gr. 2mm kolor grafitowy RAL 7024
11	W przypadku wykonania kwadratowego otworu w murze, należy w tym otworze umieścić rurę (spiro lub PCV) Ø130mm. szczeliny między otworem a rurą wypełnić pianką niskoprężną, a od strony wewnętrznej i zewnętrznej zaprawą cementową.
12	taśma rozprężna systemowa np. ILLBRUCK
13	Paroprzepuszczalna taśma okienna np. SWS UNIVERSAL OUTSIDE
14	paroszczelna taśma okienna np. SWS UNIVERSAL INSIDE
15	Lamele rolety – kolor RAL 7024
16	Wkładka z płyty polistyrenowej xps 20mm
17	Nawiewnik Aereco EHT
18	Wkładki tłumiące
19	Okap systemowy Aereco zabudowany w czerpni (20) zagłębionej w warstwie izolacji
20	Czerpnia kątowa zagłębiona w warstwie izolacji
21	Nośnik tynku NT/XPS/
22	Ocieplenie- ISOVER- POLTERM MAX 15cm – płyta z wełny mineralnej

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POLAND
National Stage 2016



**ANNA
TOBOREK**



**JOANNA
MACHERA**

Silesian University of Technology

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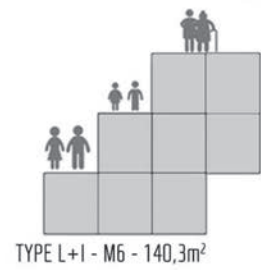
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Minsk, Belarus

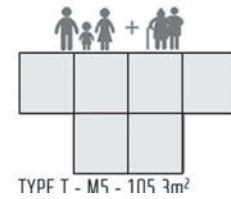
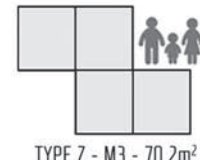


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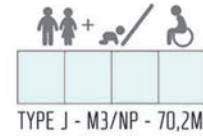
THREE-STOREY APARTMENTS



TWO-STOREY APARTMENTS



ONE-STOREY APARTMENTS

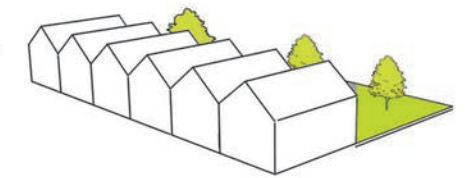


HOUSE

+



GARDEN



SINGLE-FAMILY HOUSING



HABITANT OF THE BLOCK



=

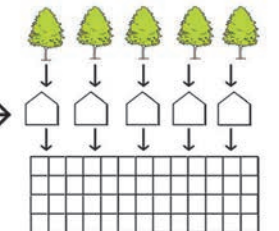


HOUSE

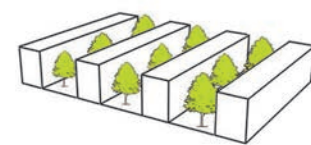
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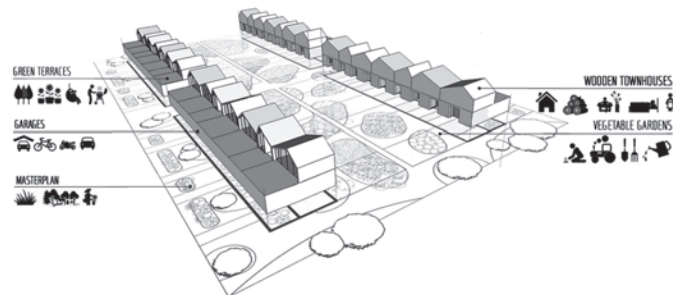
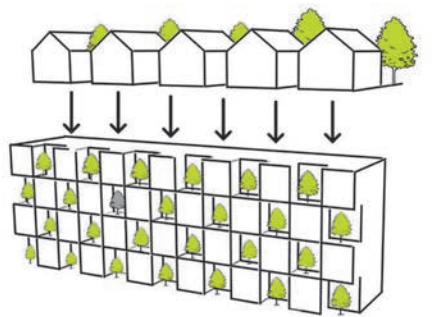
GARDEN



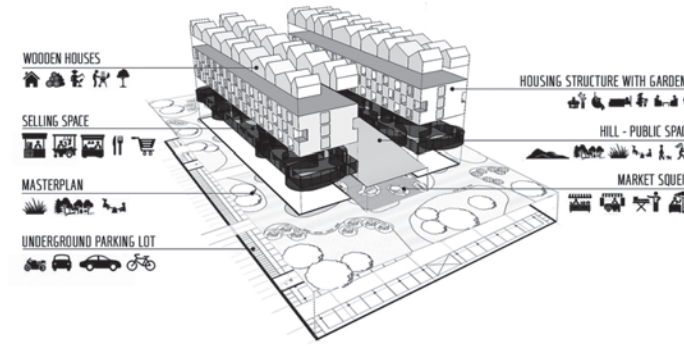
TYPICAL
SINGLE-FAMILY HOUSING



TYPICAL
MULTIFAMILY HOUSING



3D MODEL OF SINGLE-FAMILY HOUSING



3D MODEL OF MULTIFAMILY HOUSING



III PRIZE
POLAND
National Stage 2016



ALEKSANDRA
NOWOTNIAK



MAŁGORZATA
RADAŁ



PATRYCJA
JĘDRA

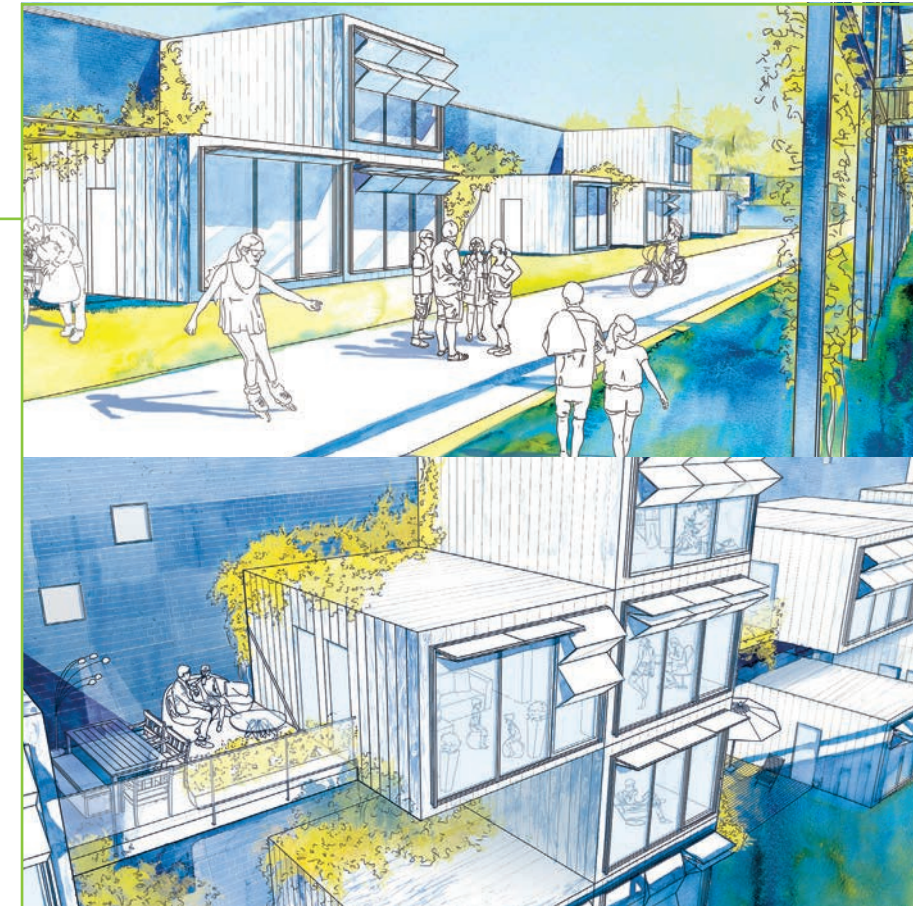
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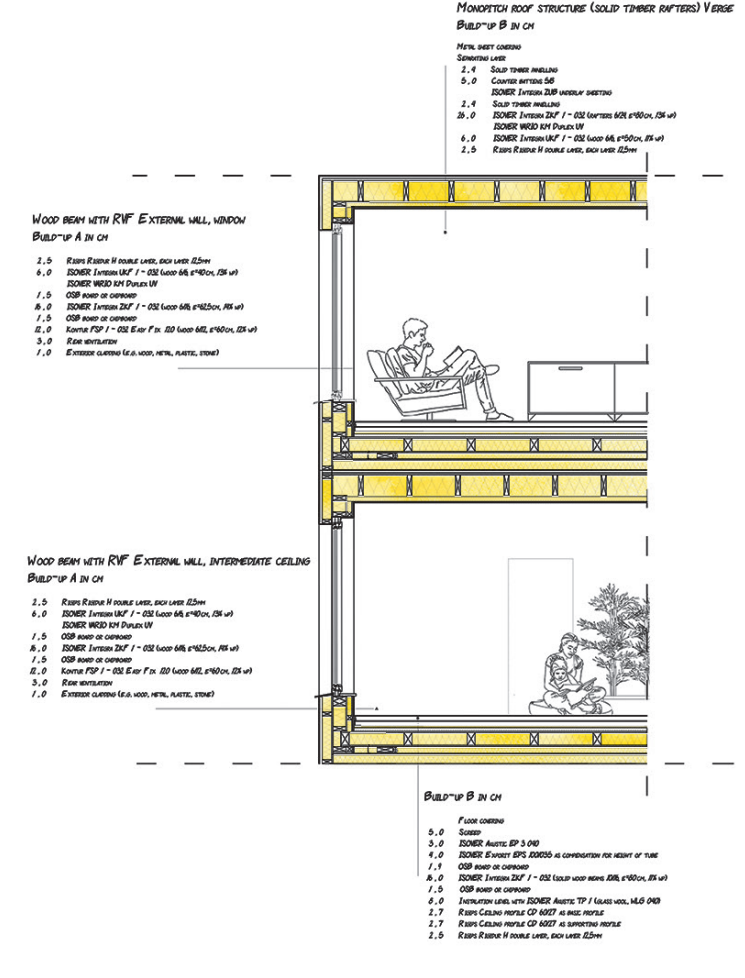
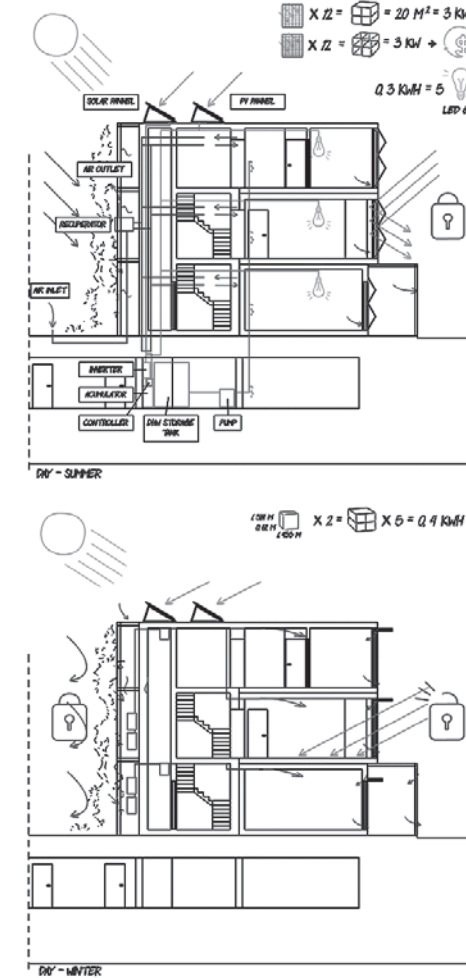
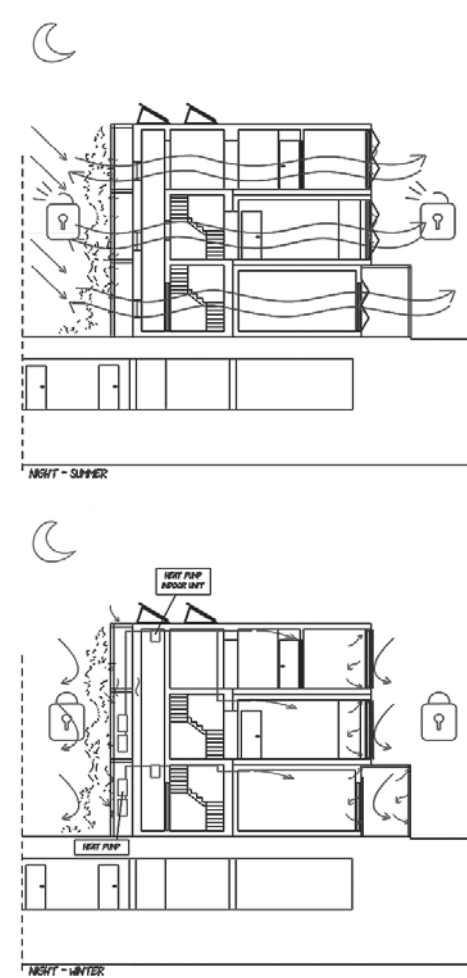
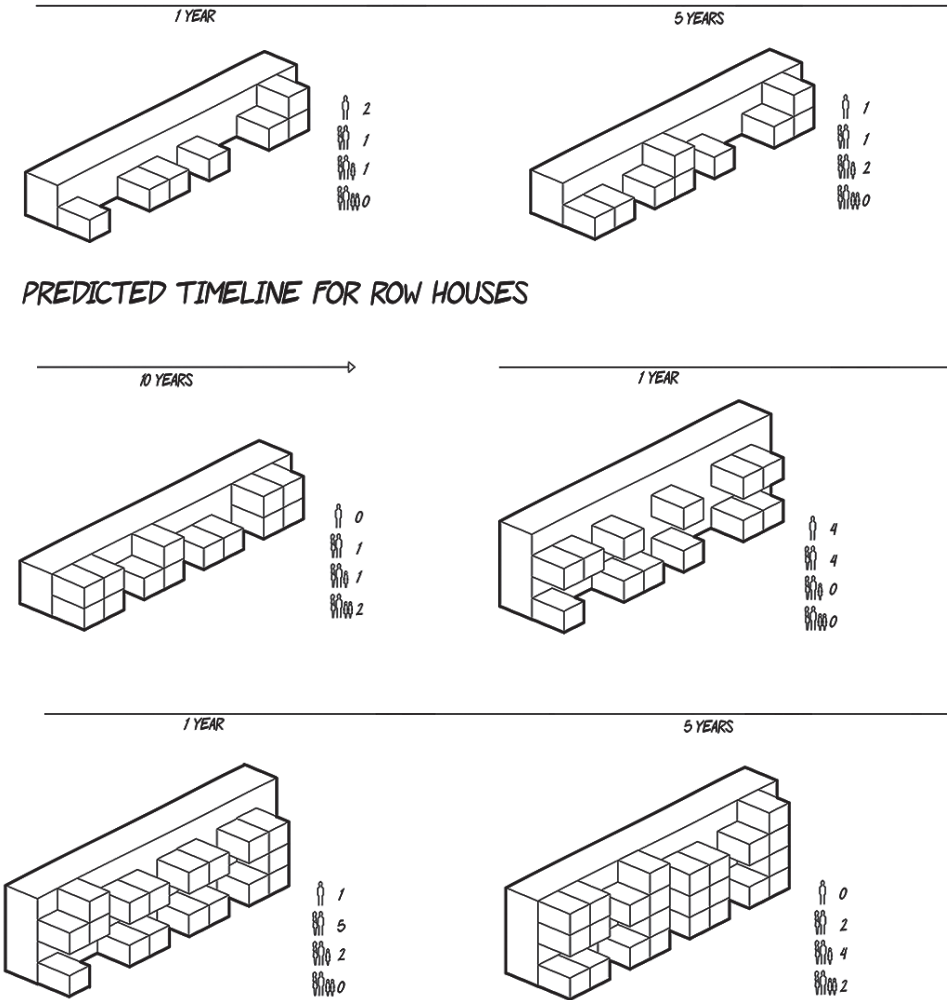
Wrocław University of Technology

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Minsk, Belarus





PRIZE
ROMANIA
National Stage 2016



**ELENA
TIRA**

Ion Mincu, Bucharest



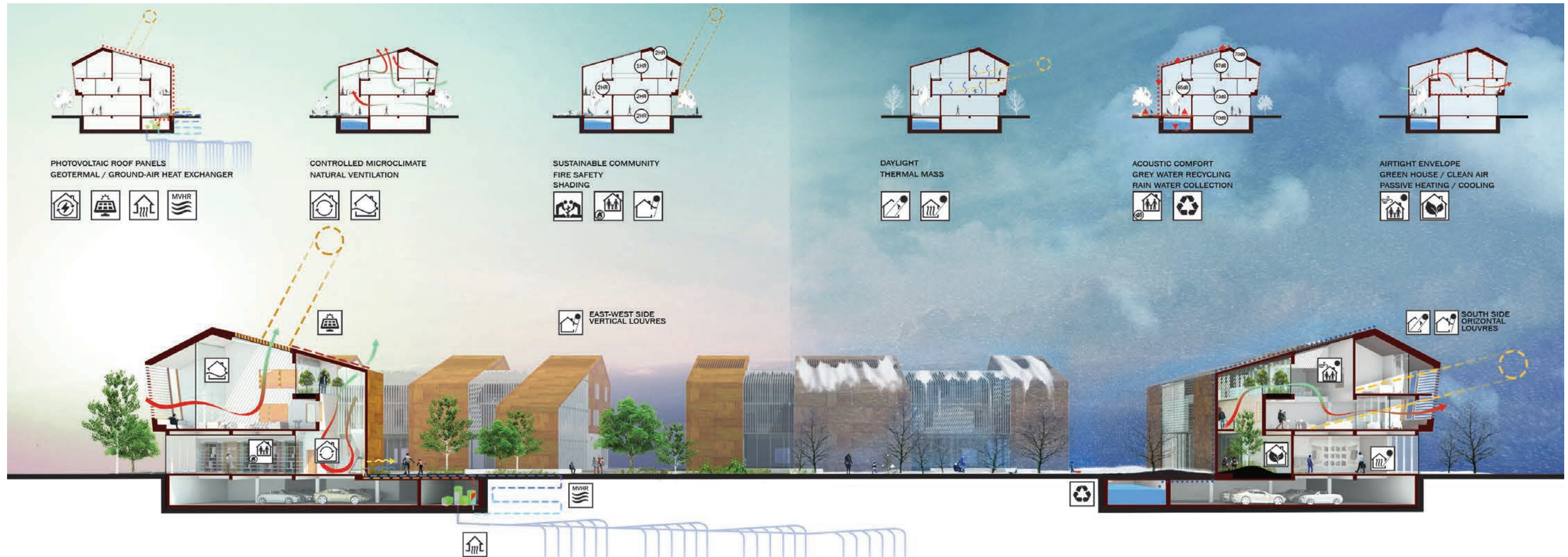
**RADU
UNGUREANU**

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Minsk, Belarus







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**ANDREI
TINTARI**

Ion Mincu, Bucharest



**VALERIA
ARTENII**

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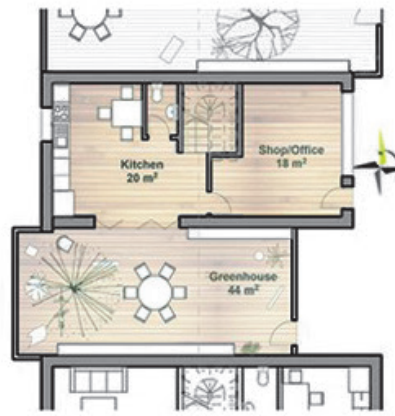
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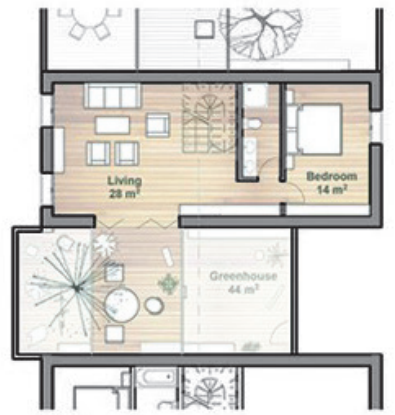


Special award

ISOVER
Multi-Comfort House
Students Contest
International stage,
Minsk 2016



Ground floor 1:100



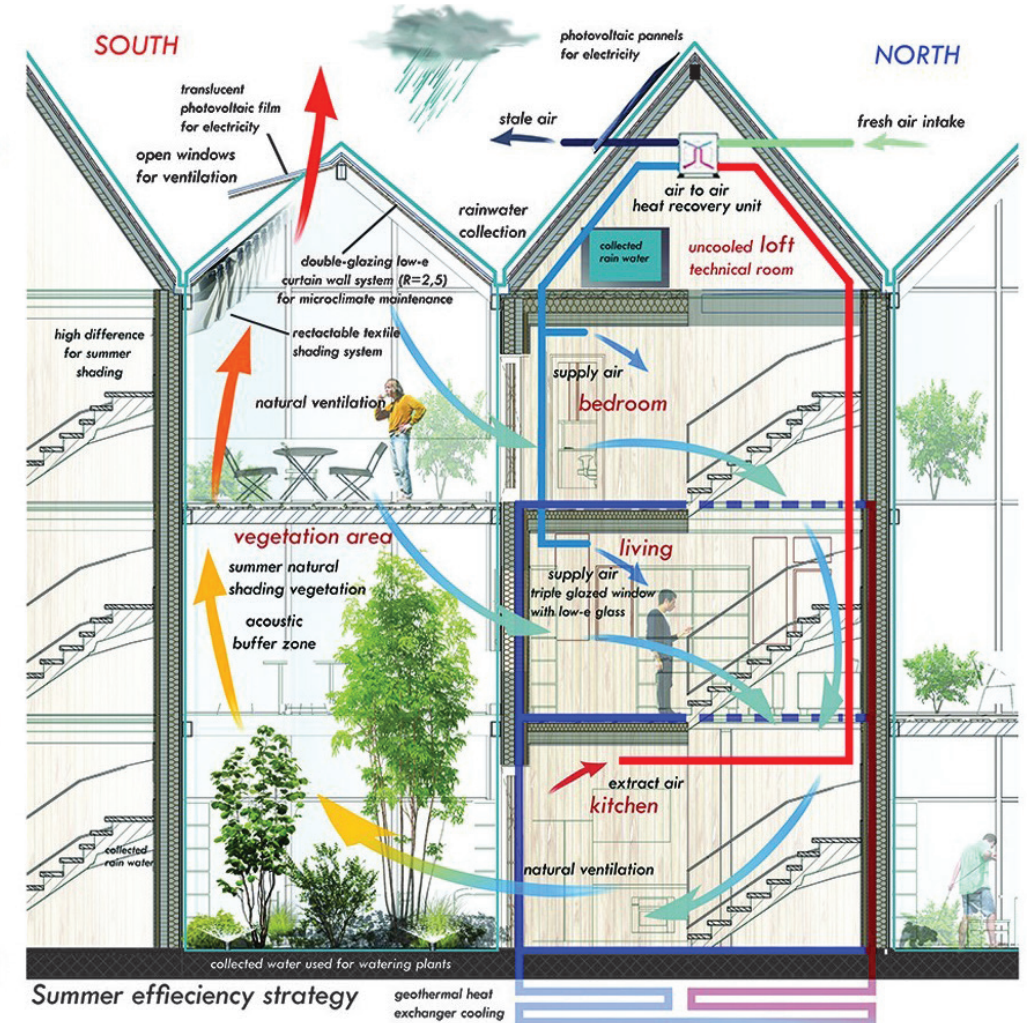
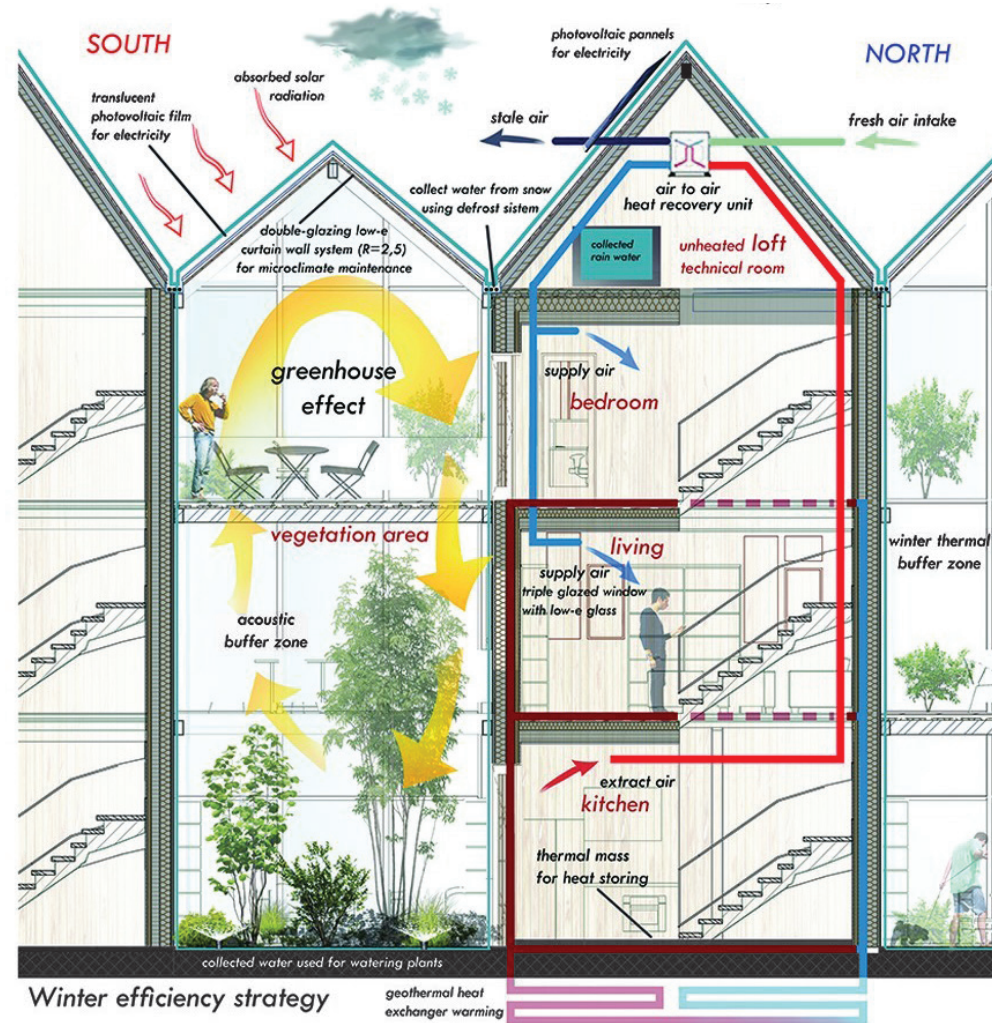
First floor 1:100



Ror houses 1st floor



Collective houses 1st floor





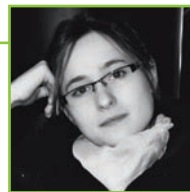
12th ISOVER Multi-Comfort House Students Contest 2016

III PRIZE
ROMANIA
National Stage 2016



**AMALIA SILVIA
VACARU**

Gh. Asachi, Iasi



**ANDREEA
MOVILA**

38

Community Development in Brest, Belarus

Minsk, Belarus

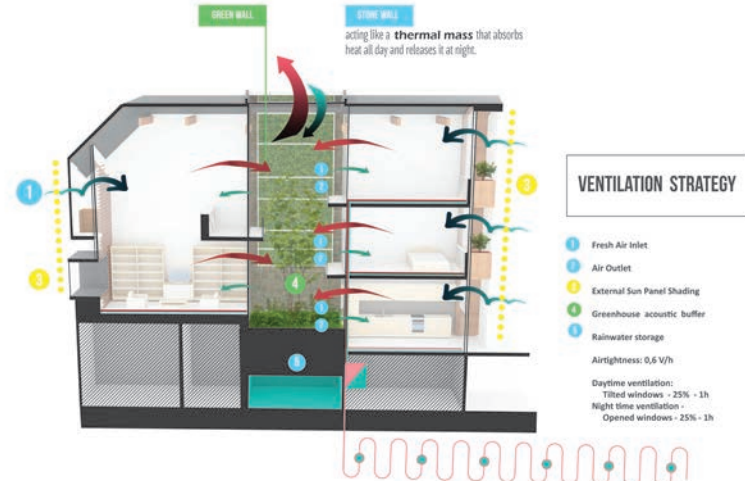
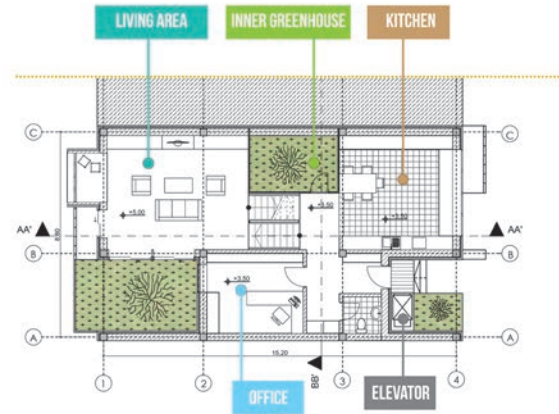


III PRIZE
ISOVER
Multi-Comfort House
Students Contest
International stage,
Minsk 2016

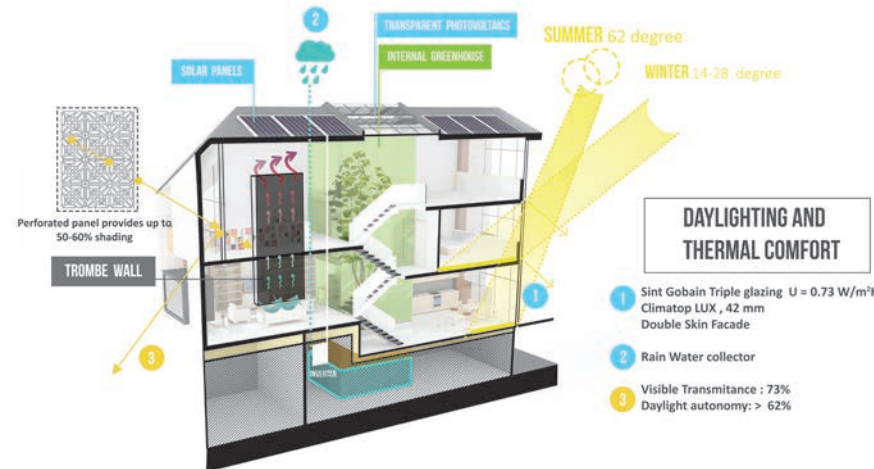
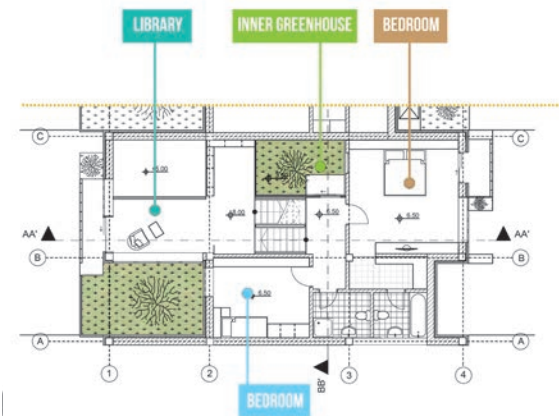
more information on www.isover-students.com

ISOVER
SAINT-GOBAIN

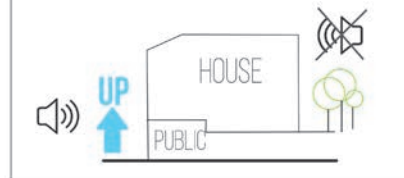
FIRST FLOOR



SECOND FLOOR



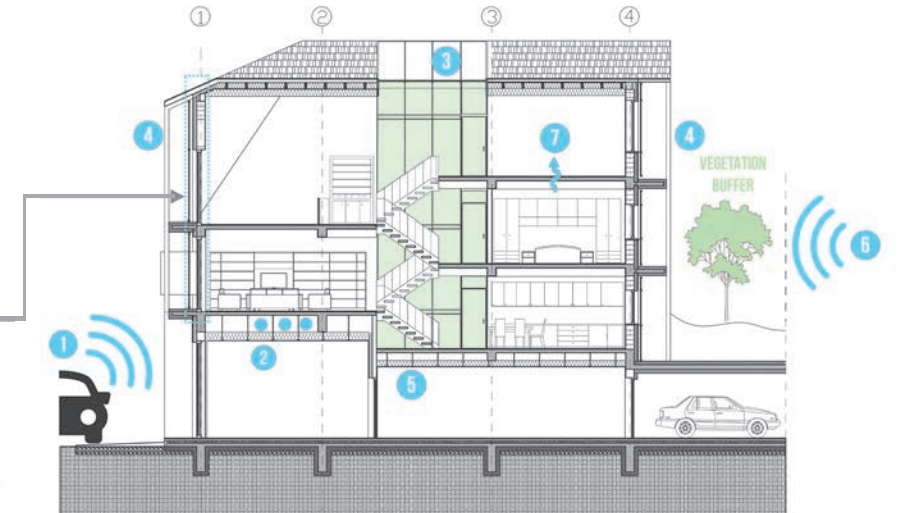
ACOUSTIC COMFORT



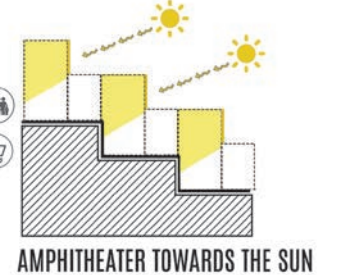
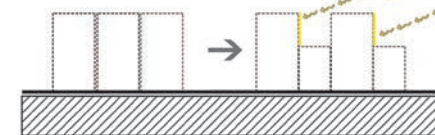
DOUBLE - SKIN FACADE

SAINT GOBAIN TRIPPLE GLAZING
CLIMATOP LUX, 35DB
42 MM, 0.73 W/M²K
U ~ 0.75 W/M²K

- 1 Background noise: (street - cars) 67 dB
- 2 Saint - Gobain PAM global RML ventilation pipes
- 3 Greenhouse acoustic buffer
- 4 Perforated panel
- 5 Sound absorbing false ceiling
Acoustic insulation ISOVER Acoustics TP 1 25 dB
- 6 Background noise (inner courtyard) 31.5 dB
- 7 Insulation between rooms - 45 dB



PRIVATE
PUBLIC



AMPHITHEATER TOWARDS THE SUN



PRIZE
RUSSIA
National Stage 2016



**MARINA
IGLINA**



**NIKOLAY
PETJANOV**



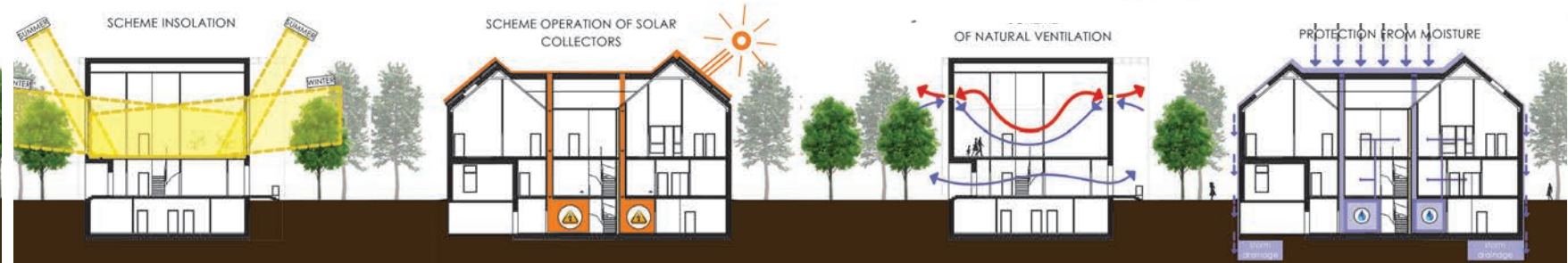
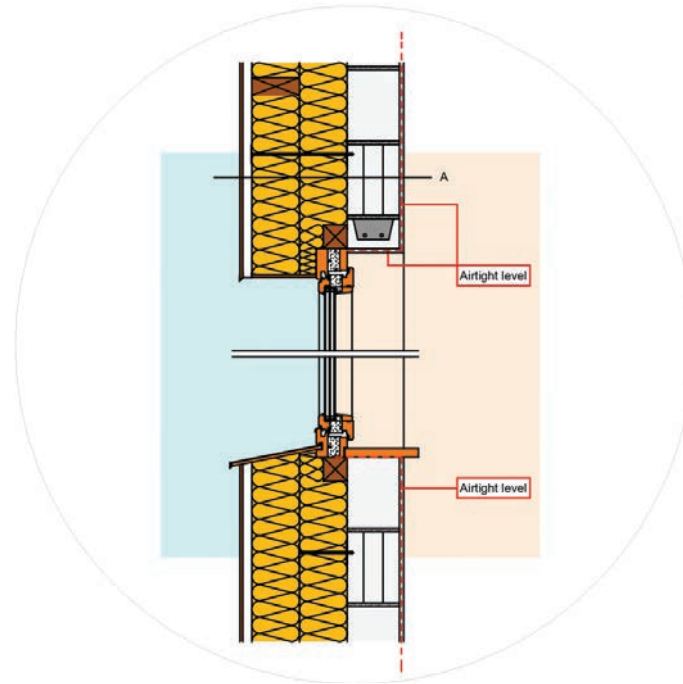
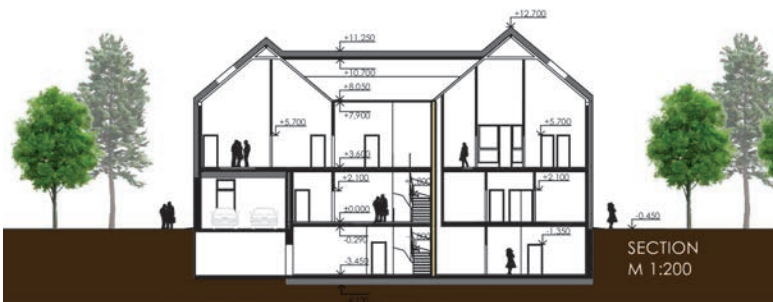
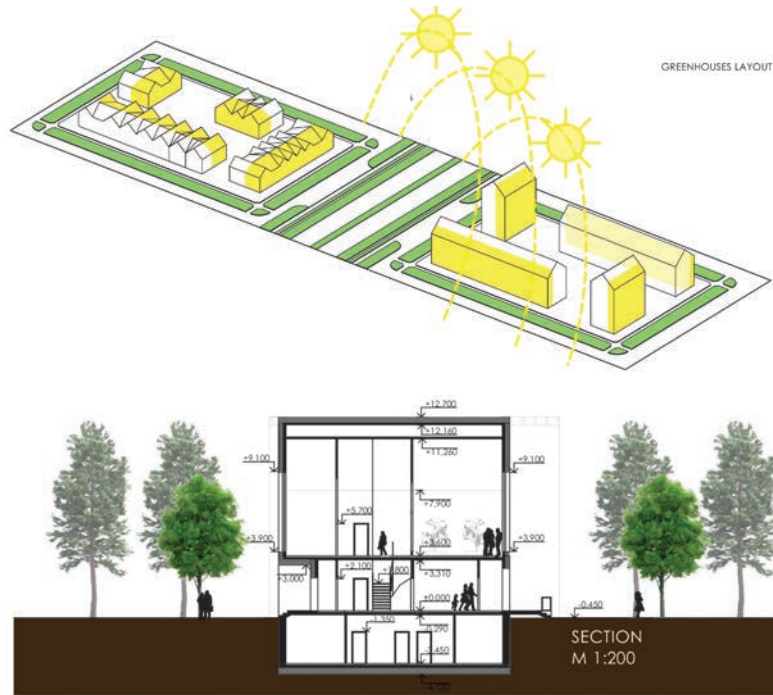
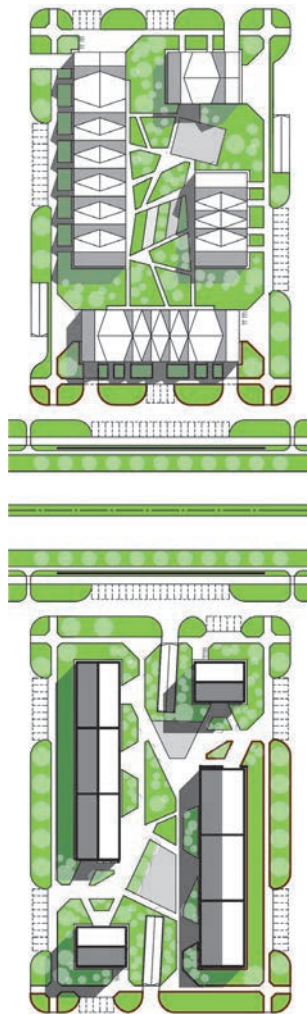
**OLESYA
MATVEEVA**

Samara State University of Architecture and Civil Engineering

39

Community Development in Brest, Belarus Minsk, Belarus





II PRIZE
RUSSIA
National Stage 2016



**DMITRY
GRINTSOV**



**ILIYAZ
KHAYROV**



**SVETLANA
KOZHAEVA**

40

Penza State University of Architecture and Construction

more information on www.isover-students.com

Community Development in Brest, Belarus

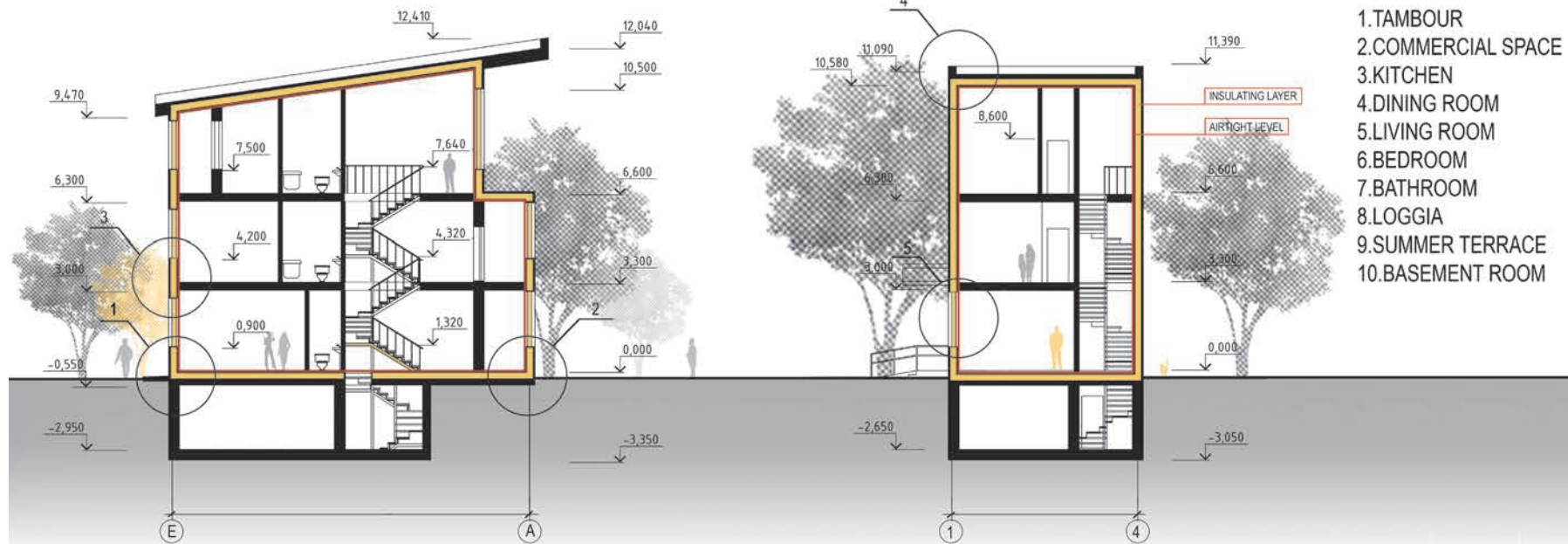
Minsk, Belarus





SECTION 1-1

SECTION 2-2



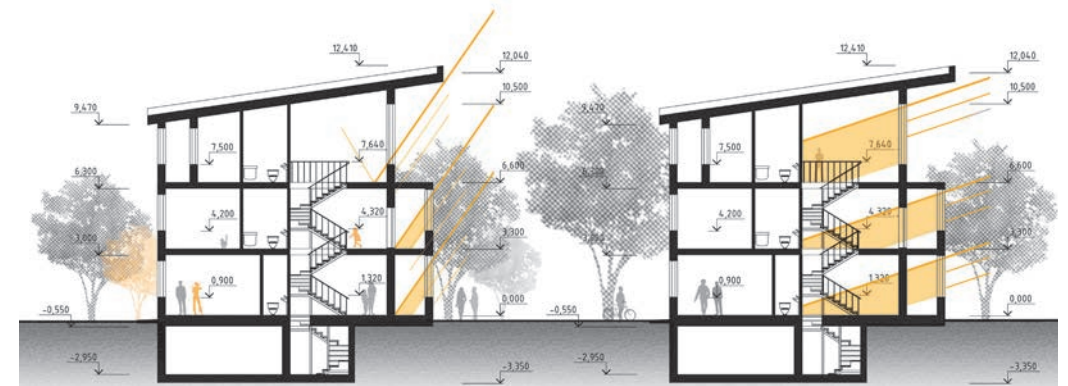
▲ EXPLICATION:

1. TAMBOUR
2. COMMERCIAL SPACE
3. KITCHEN
4. DINING ROOM
5. LIVING ROOM
6. BEDROOM
7. BATHROOM
8. LOGGIA
9. SUMMER TERRACE
10. BASEMENT ROOM

NATURAL LIGHTING

IN THE SUMMER

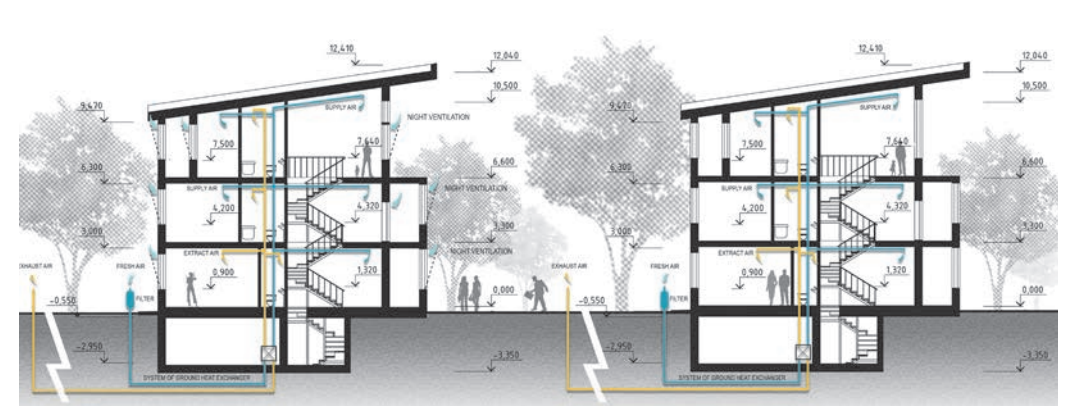
IN THE WINTER



THERMAL COMFORT/VENTILATION STRATEGY

IN THE SUMMER

IN THE WINTER



PRIZE
SLOVAKIA
National Stage 2016



**EMA
KIABOVÁ**



**ROMAN
RUHIG**

41

Slovak University of Technology, faculty of Civil Engineering in Bratislava

more information on www.isover-students.com

Community Development in Brest, Belarus

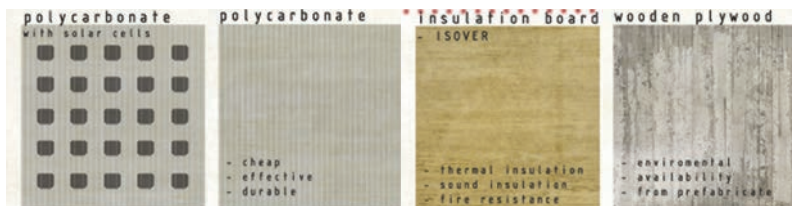
Minsk, Belarus



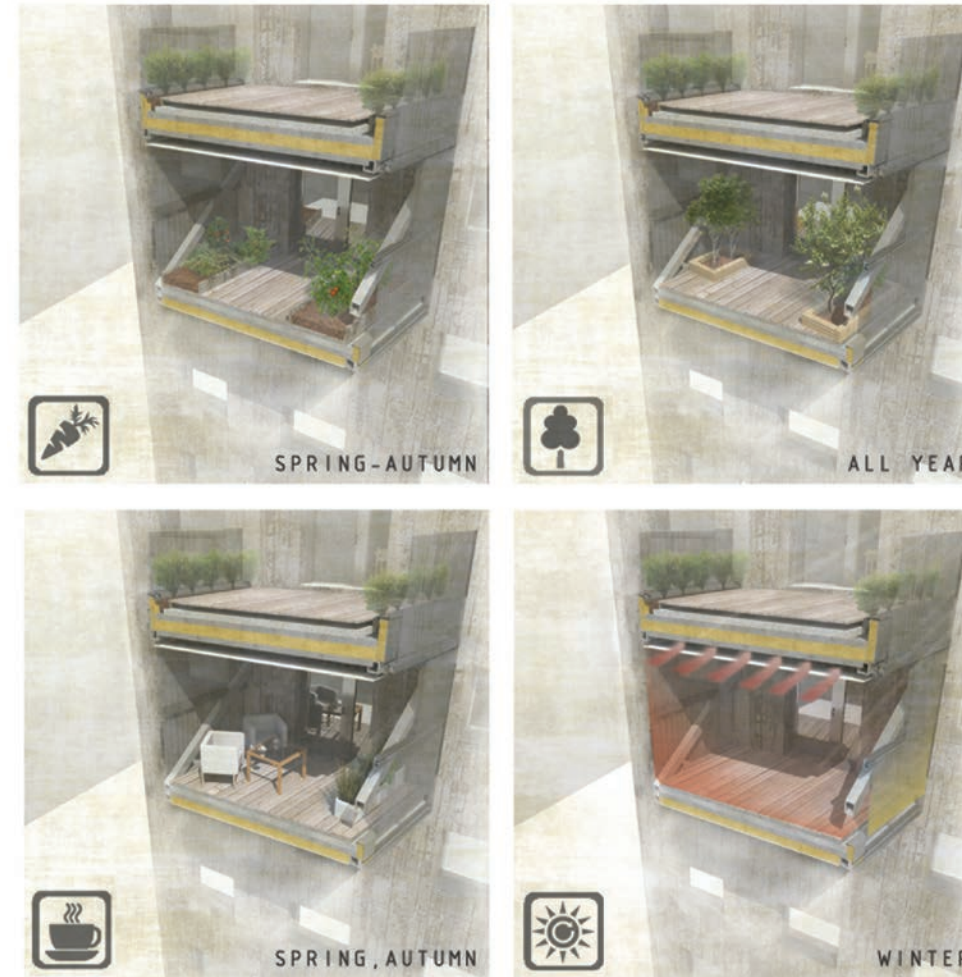


1. NP
2. NP

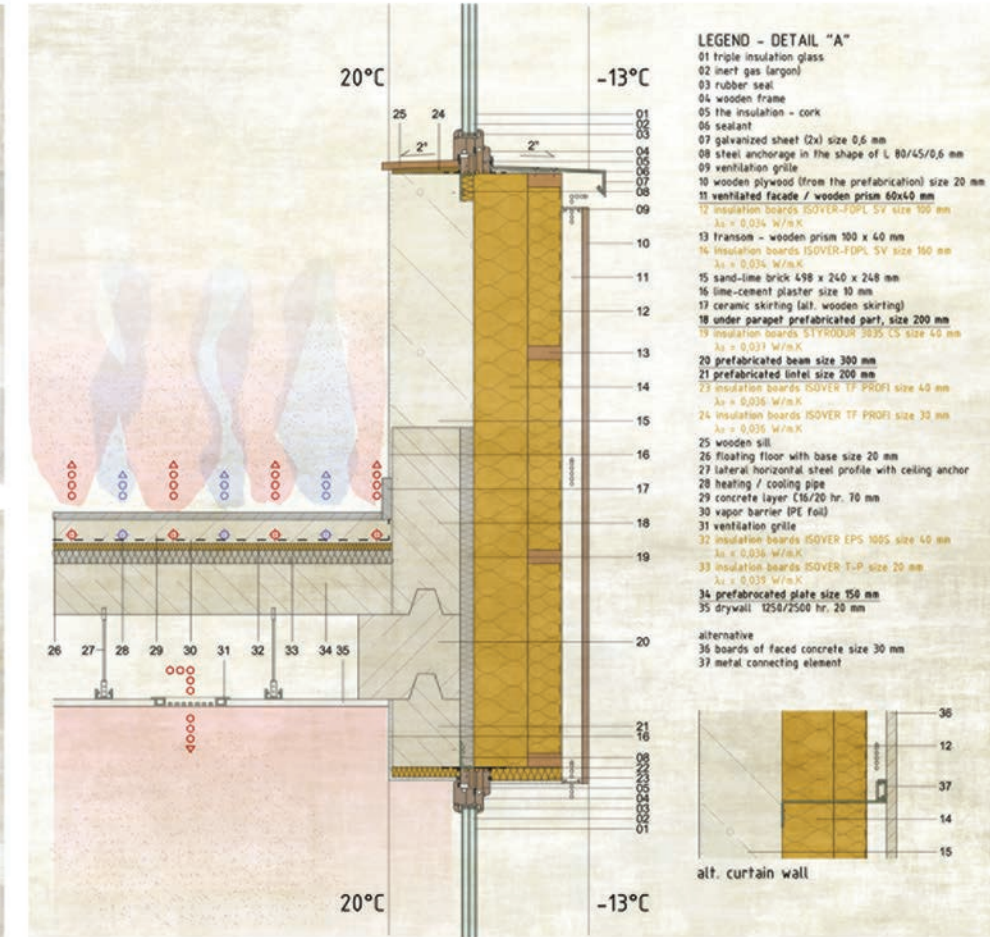
GREENHOUSES GIVES US MORE OPPORTUNITIES TO USE THEM ALL YEAR. We design it on the roof, in flats but also on the ground floor. It respects existing vegetation and it These spaces create a new area for cultivation and leisure.



AREA OF THE THIRD KIND - SEASON USING



DETAIL „A“ - CURTAIN WALL



II PRIZE
SLOVAKIA
National Stage 2016



**ANNA
JURIČKOVÁ**



**LUCIA
KOVÁROVÁ**



**VIKTOR
KASALA**

42

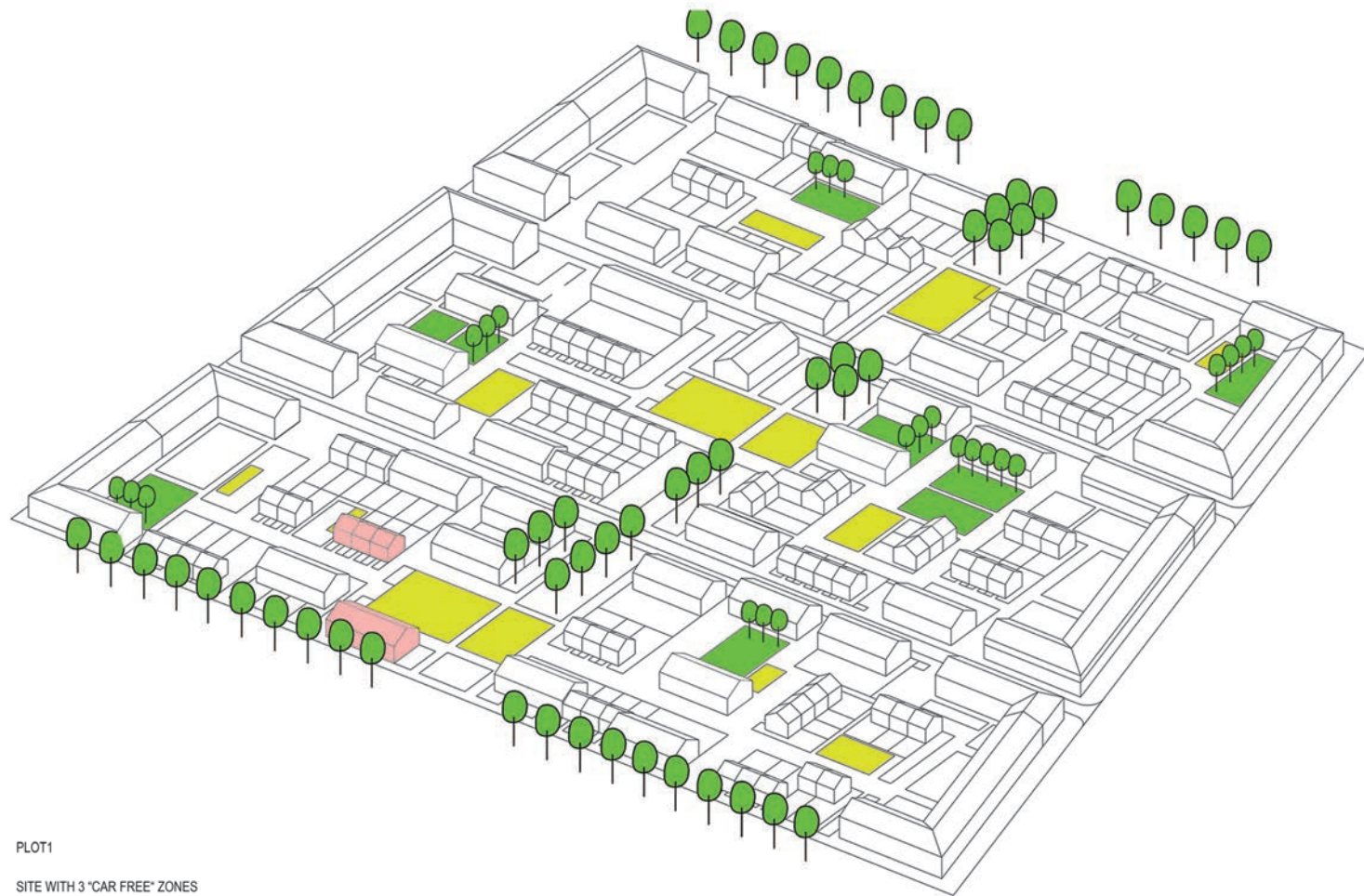
Slovak University of Technology in Bratislava, Faculty of Architecture

more information on www.isover-students.com

Community Development in Brest, Belarus

Minsk, Belarus





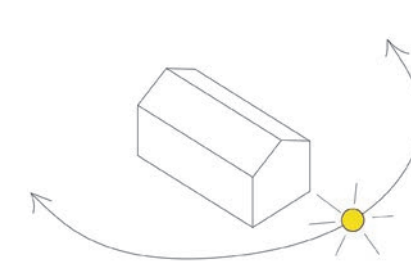
PLOT1
SITE WITH 3 "CAR FREE" ZONES
DISPLAY DIFFERENT TYPES OF CHARACTERS: PRIVATE, SEMIPRIVATE AND PUBLIC SPACES



ROWHOUSE 1. FLOOR PLAN



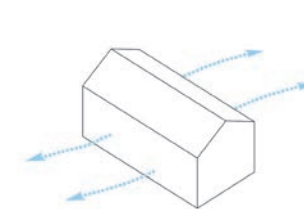
RESIDENTIAL HOUSE 1. FLOOR PLAN



BUILDING INSULATION SCHEME



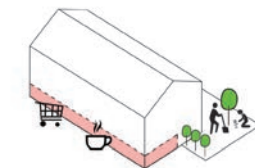
RAIN WATER COLLECTOR TANK



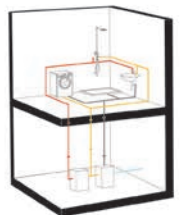
NATURAL VENTILATION



EXTERIOR SUNBLIND SYSTEM



PUBLIC, SEMI PUBLIC AND PRIVATE SPACES



WASTE WATER RECUPERATION
COLD WATER IS SUPPLIED TO HEAT EXCHANGER
WHERE IS PREHEATED BY WASTE WATER

III PRIZE
SLOVAKIA
National Stage 2016



**DÁVID
KRULIAC**



**JOZEF
SPURNÝ**

43

Slovak University of Technology in Bratislava, Faculty of Architecture

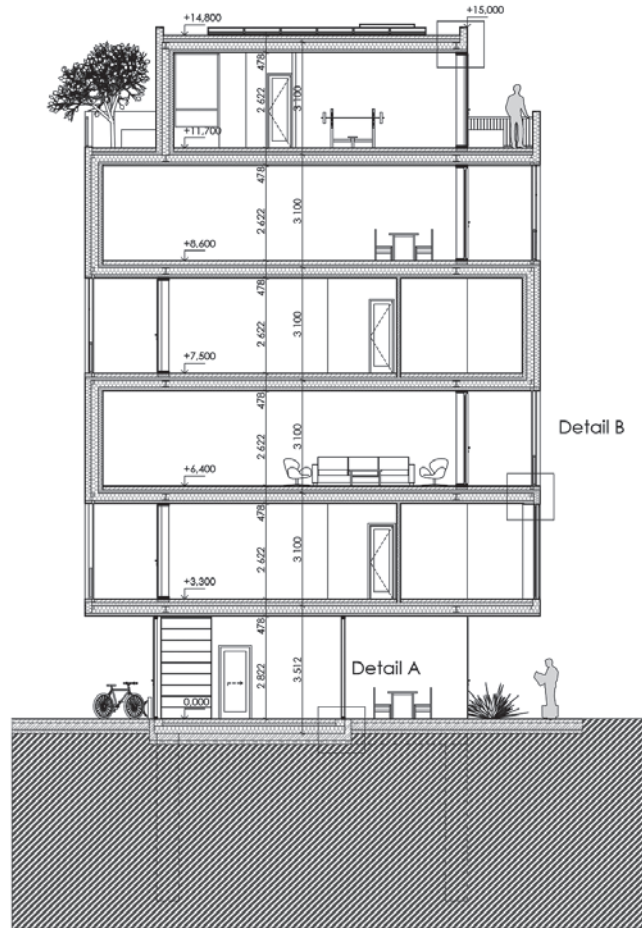
more information on www.isover-students.com

Community Development in Brest, Belarus

Minsk, Belarus

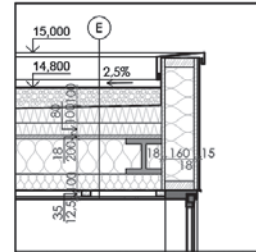


CROSS SECTION

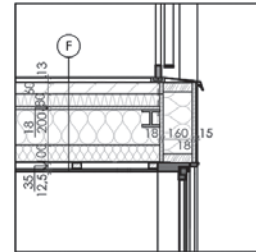


Detail C

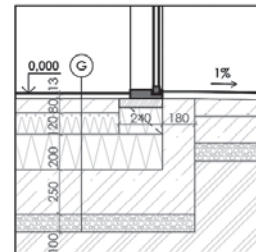
STRUCTURE



Detail C



Detail B



Detail A

STRUCTURE E

- gravel 100mm
- hydro insulation 100mm $\lambda=0.036$
- sloping boards EPS 100S 80mm $\lambda=0.033$
- XPS STYRODUR 3000 CS 18mm
- particleboard 200mm $\lambda=0.033$
- ISOVER UNIROL PROFI 100mm $\lambda=0.036$
- ISOVER TF PROFI
- vapor barrier
- bearing of drywall 35mm
- drywall RIGIPS DF 12.5mm

STRUCTURE F

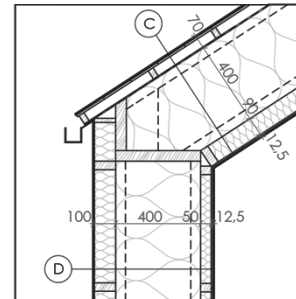
- ceramic tiles 13mm
- hydro insulation 60mm
- sponge concrete layer 80mm $\lambda=0.033$
- XPS STYRODUR 3000 CS 18mm
- particleboard 200mm $\lambda=0.033$
- ISOVER UNIROL PROFI 100mm $\lambda=0.036$
- ISOVER TF PROFI
- vapor barrier
- bearing of drywall 35mm
- drywall RIGIPS DF 12.5mm

STRUCTURE G

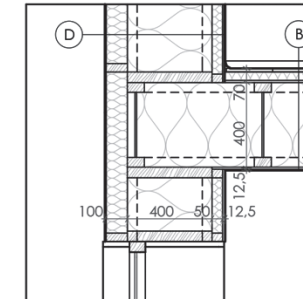
- ceramic tiles 13mm
- sponge concrete layer 80mm
- XPS STYRODUR 3000 CS 320mm $\lambda=0.033$
- water-resistant concrete 250mm
- gravel 100mm



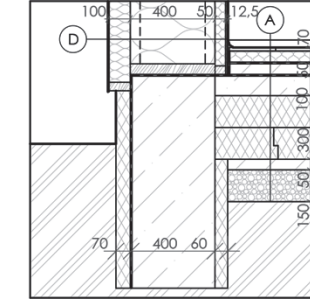
STRUCTURE



Detail C



Detail B



Detail A

STRUCTURE A

- wooden floor 15mm
- particleboard 19mm
- vapor barrier 0.2mm
- ISOVER T-P 60mm $\lambda=0.039$
- concrete layer 50mm
- hydro insulation 2mm
- concrete cover 100mm
- XPS STYRODUR 3000CS 300mm $\lambda=0.033$
- concrete layer 50mm
- gravel trampled 150mm
- terrain

STRUCTURE B

- wooden floor 15mm
- particleboard 19mm
- vapor barrier 0.2mm
- ISOVER T-P 40mm $\lambda=0.039$
- particleboard 10mm
- ISOVER UNIROL PROFI 400mm $\lambda=0.033$
- wood panneling 10mm

STRUCTURE C

- metal roofing 6mm
- separating layer 1mm
- particleboard 12mm
- ISOVER UNIROL PROFI 500mm $\lambda=0.033$
- particleboard 10mm
- wood panneling 10mm

STRUCTURE D

- drywall RIGIPS DF 12.5mm
- ISOVER UNIROL PROFI 450mm $\lambda=0.033$
- particleboard 10mm
- ISOVER FDPL 100mm $\lambda=0.034$
- wood panneling 10mm

PRIZE
SLOVENIA
National Stage 2016



**ŠPELA
JERKIČ**



**URŠKA
LEBAN**

University of Ljubljana

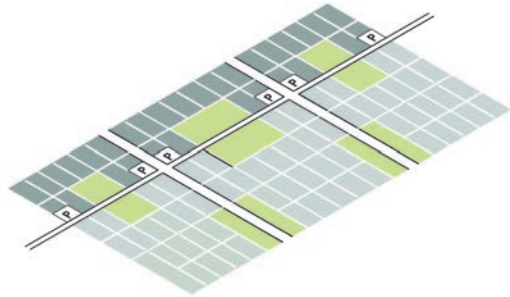
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Community Development in Brest, Belarus

Minsk, Belarus



CONCEPT



ROW HOUSES (module 1)

Dynamic row houses with green rooftops create a unique landscape and at the same time offer a lot of green outdoor spaces.

PARK / PLAYGROUND

Existing vegetation is integrated in the park areas. Road is not an obstacle, because nature flows through and connects module 1 with module 2.

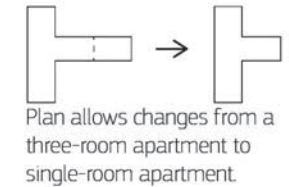
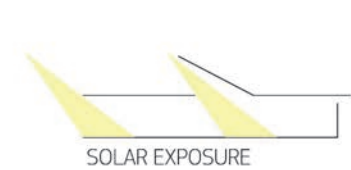
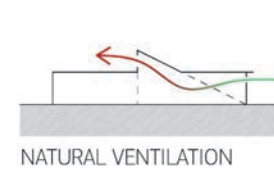
MULTI-FAMILY HOUSES (module 2)

Priorities of these multi-family houses are sunlight and nature. South orientation, atria and green walls contribute to the high quality of living.

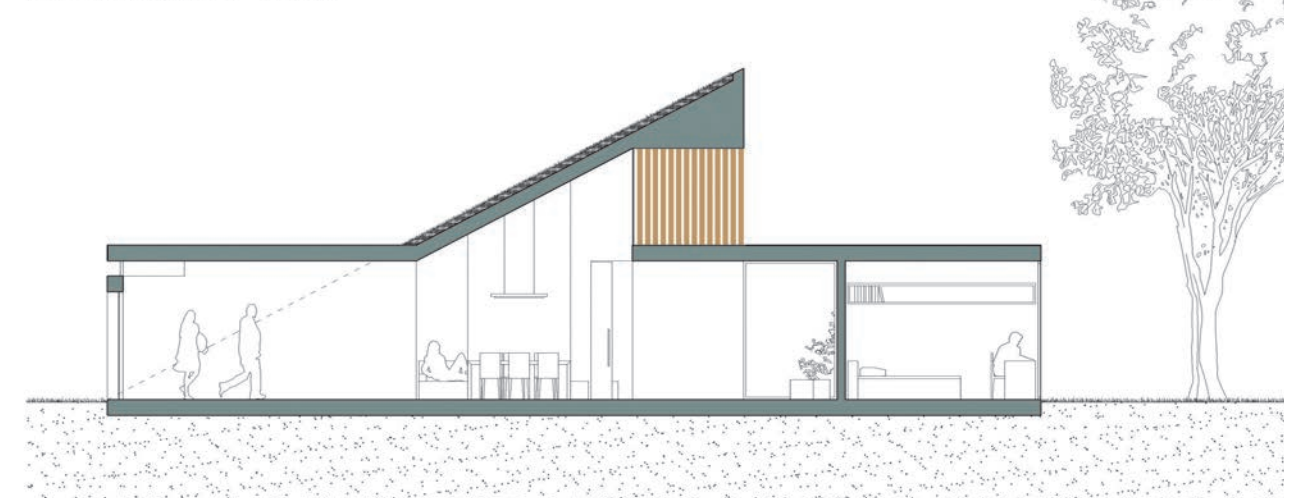
PARKING

Module 1 leads to car-free place. Residents leave their cars on the outskirts of the neighborhood and also practice car-sharing and car-pooling method. In module 2 they possess an underground garage.

PLOT 1 Situation M_1:500



PLOT 1 Cross section M_1:100



II PRIZE
SLOVENIA
National Stage 2016



**BENEDIKT
BUCHMÜLLER**



**CHIARA
DIEGELMANN**



**OSCAR SOLER
TURULL**

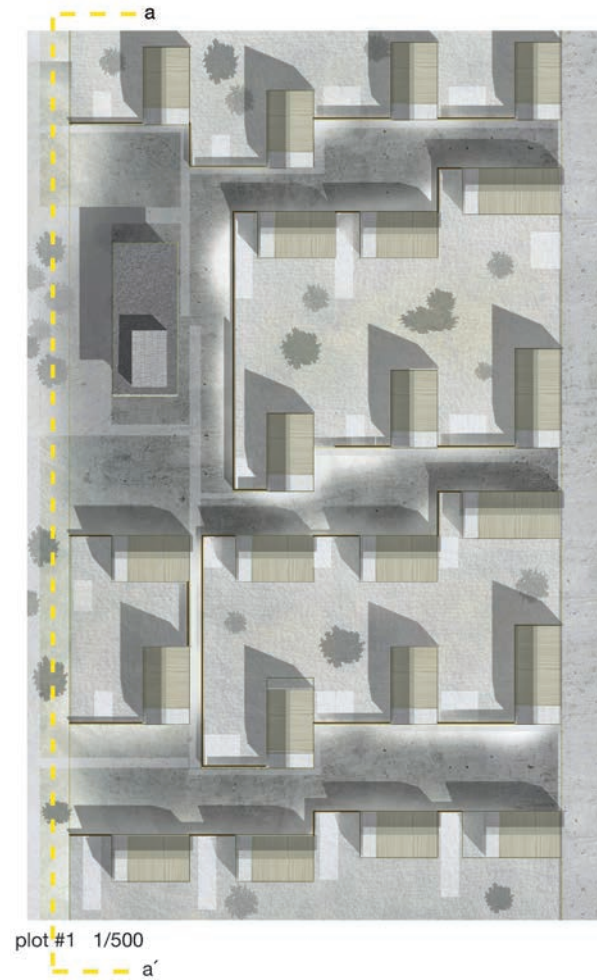
University of Ljubljana

45

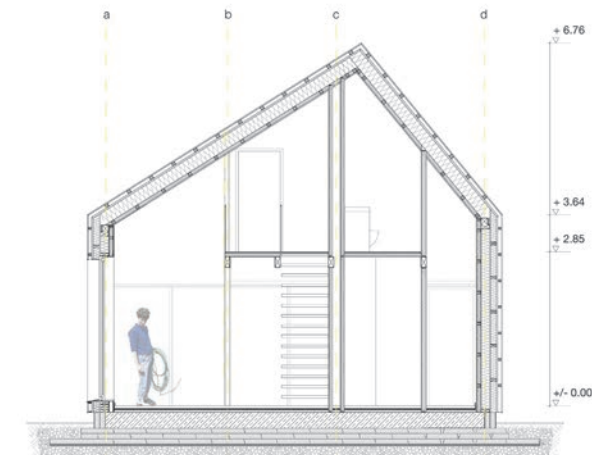
Community Development in Brest, Belarus

Minsk, Belarus

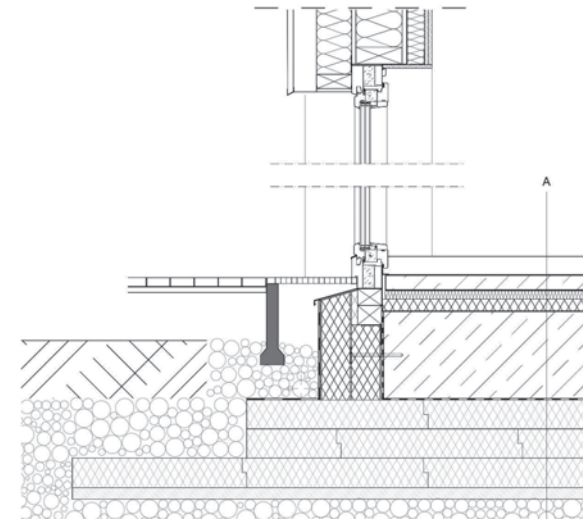




elevation a-a' 1/500

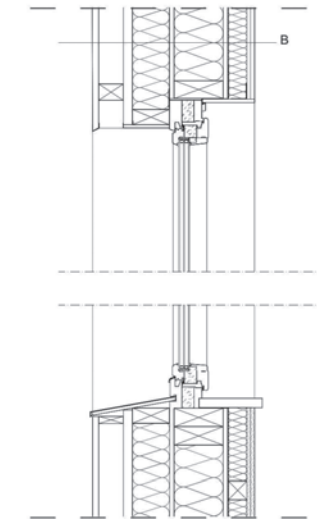


section c-c' 1/100



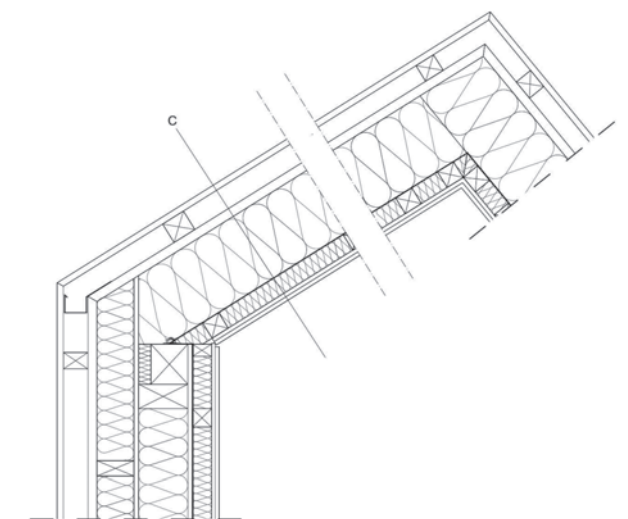
E section

- 5,0 Floor covering
- Screed
- Vapour retarder and separating layer
- 3,0 ISOVER Akustic EP 3 040
- 4,0 ISOVER Export EPS 100/035
- as compensation for height
- 0,5 Sealing against moisture
- 30,0 Concrete foundation slab
- Separating layer
- 10,0 Styrodur CS
- 10,0 Styrodur CS
- 10,0 Styrodur CS
- Granular subbase



F section

- 2,5 Rigips Rigidur H double layer, each layer 12.5mm
- 6,0 ISOVER Integra UKF 1-032 (wood 6/6 e=40cm, 13% wp)
- ISOVER VARIO KM Duplex UV
- 1,5 OSB board or chipboard
- 16,0 ISOVER Integra ZKF 1-032 (wood 6/16 e=62.5cm, 14%wp)
- 1,5 OSB board or chipboard
- 12,0 Kontur FSP 1-032 Easy Fix 120 (wood 6/12 e=60cm, 12%wp)
- 3,0 Rear ventilation
- 6,0 wooden board facade
- 2,0 Exterior cladding (wood)
- RAL windows



G section

- 2,0 Wooden lathing
- 7,0 Counter battens 7/8
- ISOVER Integra ZUB underlay sheeting
- 3,0 Solid timber panelling
- 24,0 ISOVER Integra ZKF 1-032 (wood 6/24 e=70cm, 8% wp)
- ISOVER VARIO KM Duplex UV
- ISOVER Integra UKF 1-032 (wood 6/6 e=50cm, 11% wp)
- 2,5 Rigips Rigidur H double layer, each layer 12.5 m

III PRIZE
SLOVENIA
National Stage 2016



**JAN
TINUNIN**



**SABINA
TROHA**

University of Ljubljana

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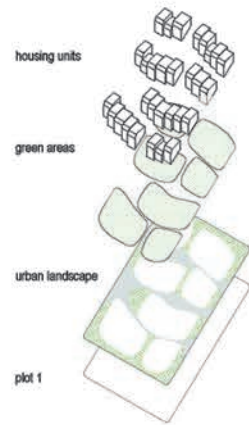
Community Development in Brest, Belarus

Minsk, Belarus



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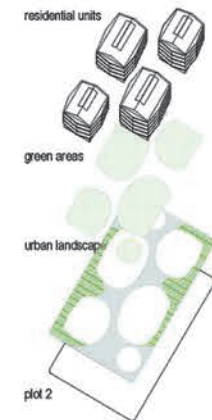
URBAN LAYERING



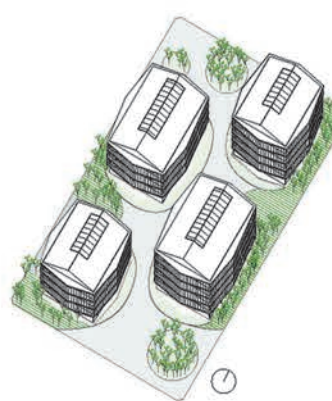
URBANISM



URBAN LAYERING

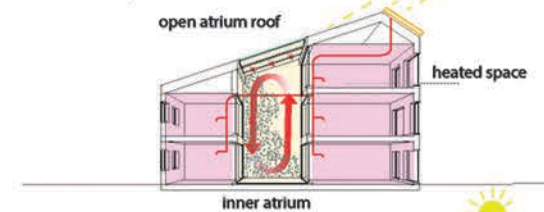


URBANISM

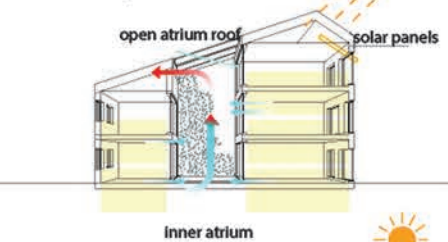


PASSIVE HOUSE CONCEPT

climate concept - WINTER

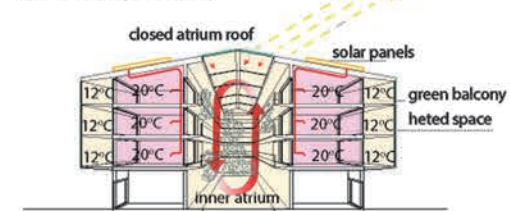


climate concept - SUMMER

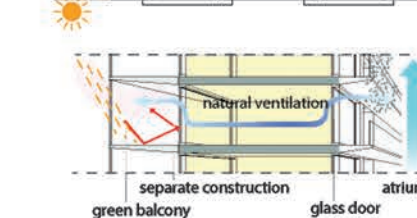
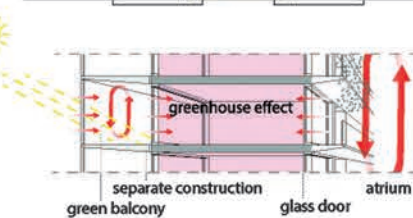
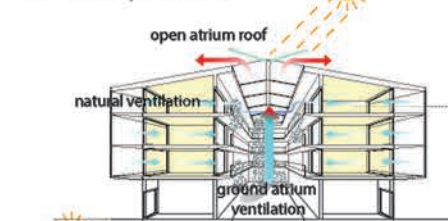


PASSIVE HOUSE CONCEPT

climate concept - WINTER



climate concept - SUMMER

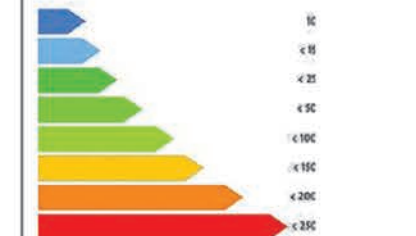


CALCULATIONS

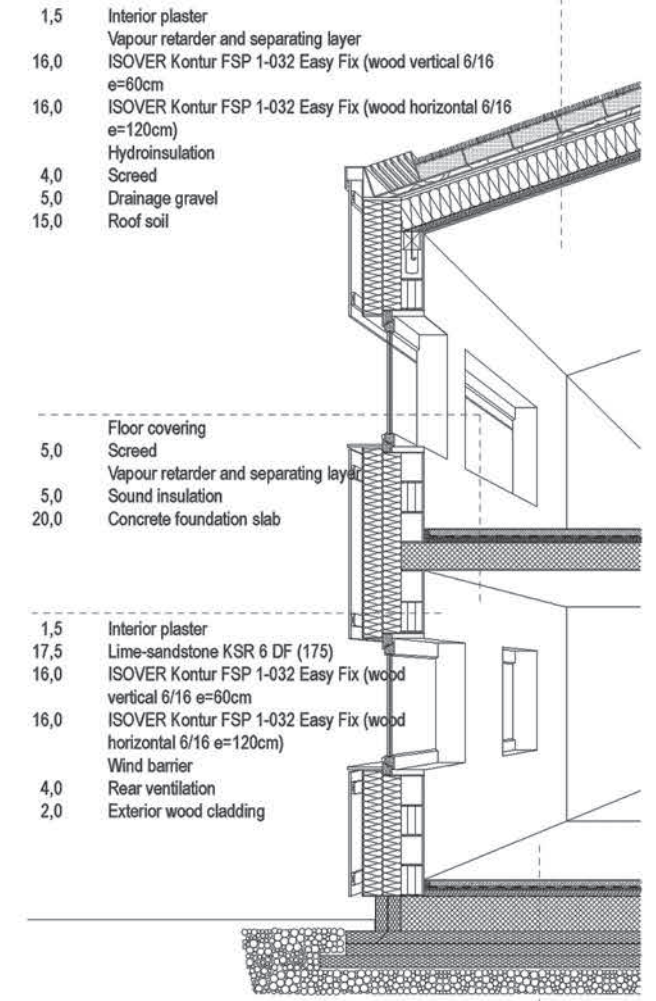
Specific Heat Demand

Transmission Heat Losses:	4563.60 kWh/a
Ventilation Heat Losses:	1868.72 kWh/a
Total Heat Losses:	6432.33 kWh/a
Internal Heat Gains:	2142.50 kWh/a
Solar Heat Gains:	1697.38 kWh/a
Total Heat Gains:	3716.99 kWh/a
Annual Heat Demand:	2715.34 kWh/a
Specific Heat Demand:	13.92 kWh/(m ² a)

Energy efficiency classes



5,0	Floor covering
5,0	Screed
3,0	Vapour retarder and separating layer
4,0	ISOVER Akustic EP 3 040
0,5	ISOVER Export EPS 100/035 as compensation for height of tube
30,0	Sealing against moisture
10,0	Concrete foundation slab
0,5	Separating layers
10,0	Styrodur CS
0,5	Hydroinsulation
10,0	Styrodur CS
10,0	Styrodur CS
	Granular subbase



Community Development in Brest, Belarus

Minsk, Belarus

I PRIZE
SOUTH AFRICA
National Stage 2016



**JAMES MICHAEL
RUSSWURM**



**MIGUEL SANTOS
CARVALHO**



**TIAGO DA COSTA
VASCONCELOS**

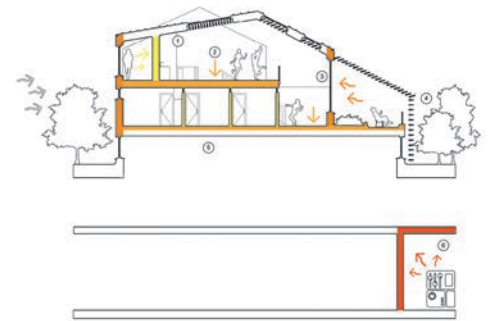
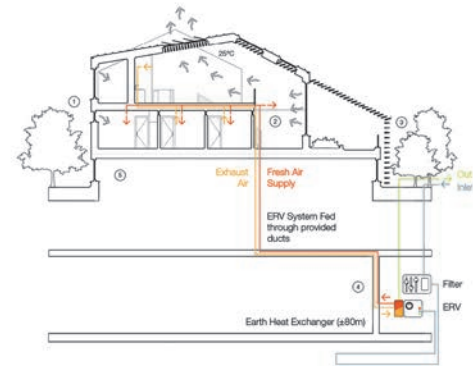
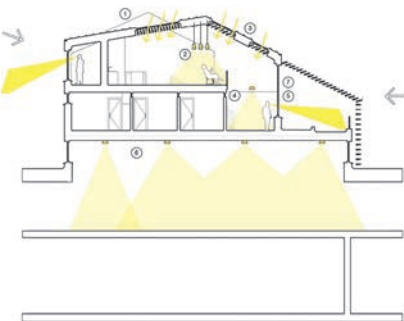
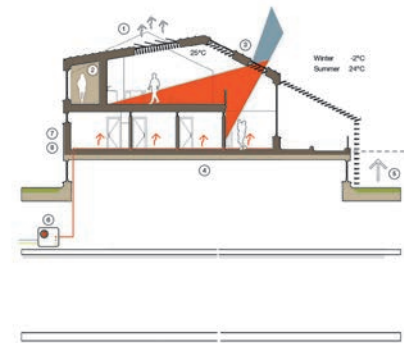
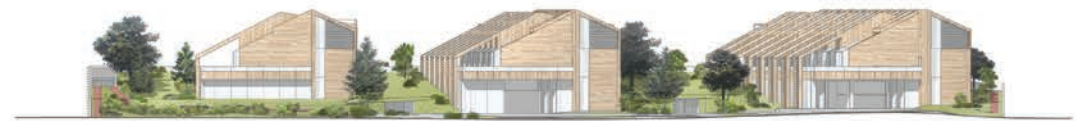
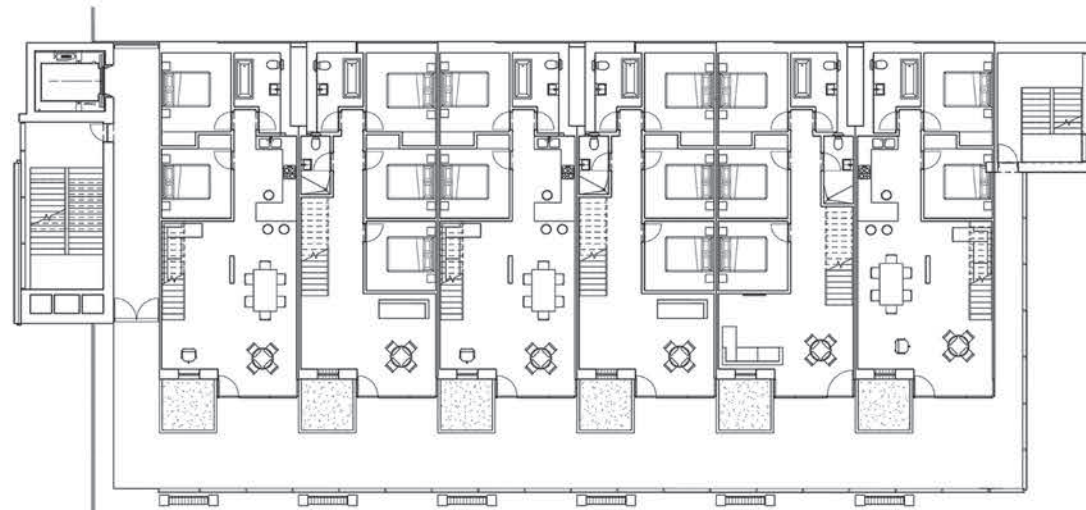
Johannesburg University

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II PRIZE
ISOVER
Multi-Comfort House
Students Contest
International stage,
Minsk 2016



PRIZE
SPAIN
National Stage 2016



**GABRIEL DOVAL
CARAMÉS**



**RUBÉN DÍAZ
FERNÁNDEZ**



**TANIA FRAGA
BEIROA**

48

Coruña University

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Community Development in Brest, Belarus

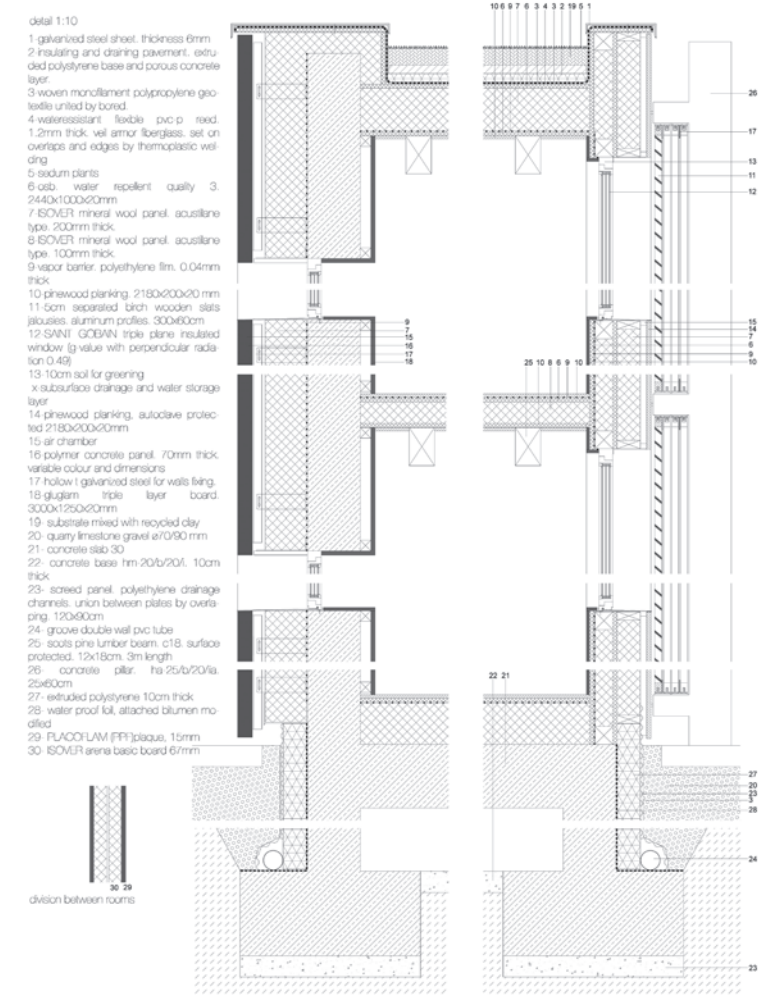
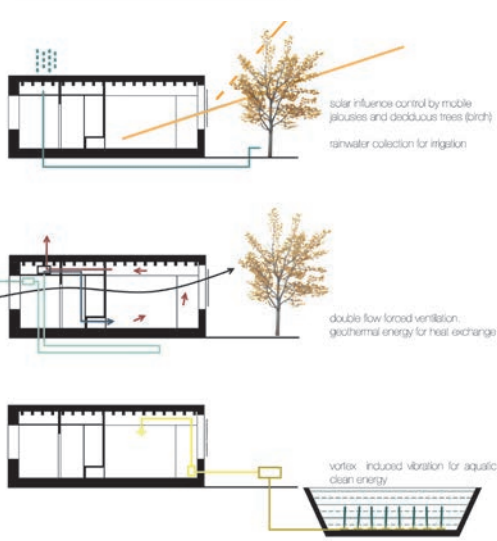
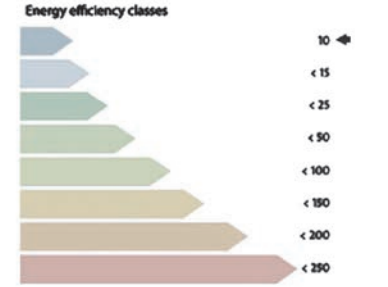
Minsk, Belarus





Specific Heat Demand

Transmission Heat Losses:	5179.70 kWh/a
Ventilation Heat Losses:	241.86 kWh/a
Total Heat Losses:	5421.56 kWh/a
Internal Heat Gains:	1648.08 kWh/a
Solar Heat Gains:	3571.02 kWh/a
Total Heat Gains:	4429.87 kWh/a
Annual Heat Demand:	991.70 kWh/a
Specific Heat Demand:	6.61 kWh/(m ² a)





12th ISOVER Multi-Comfort House Students Contest 2016

PRIZE
TURKEY
National Stage 2016



GENCAY
CUBUK

Istanbul Technical University

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Community Development in Brest, Belarus

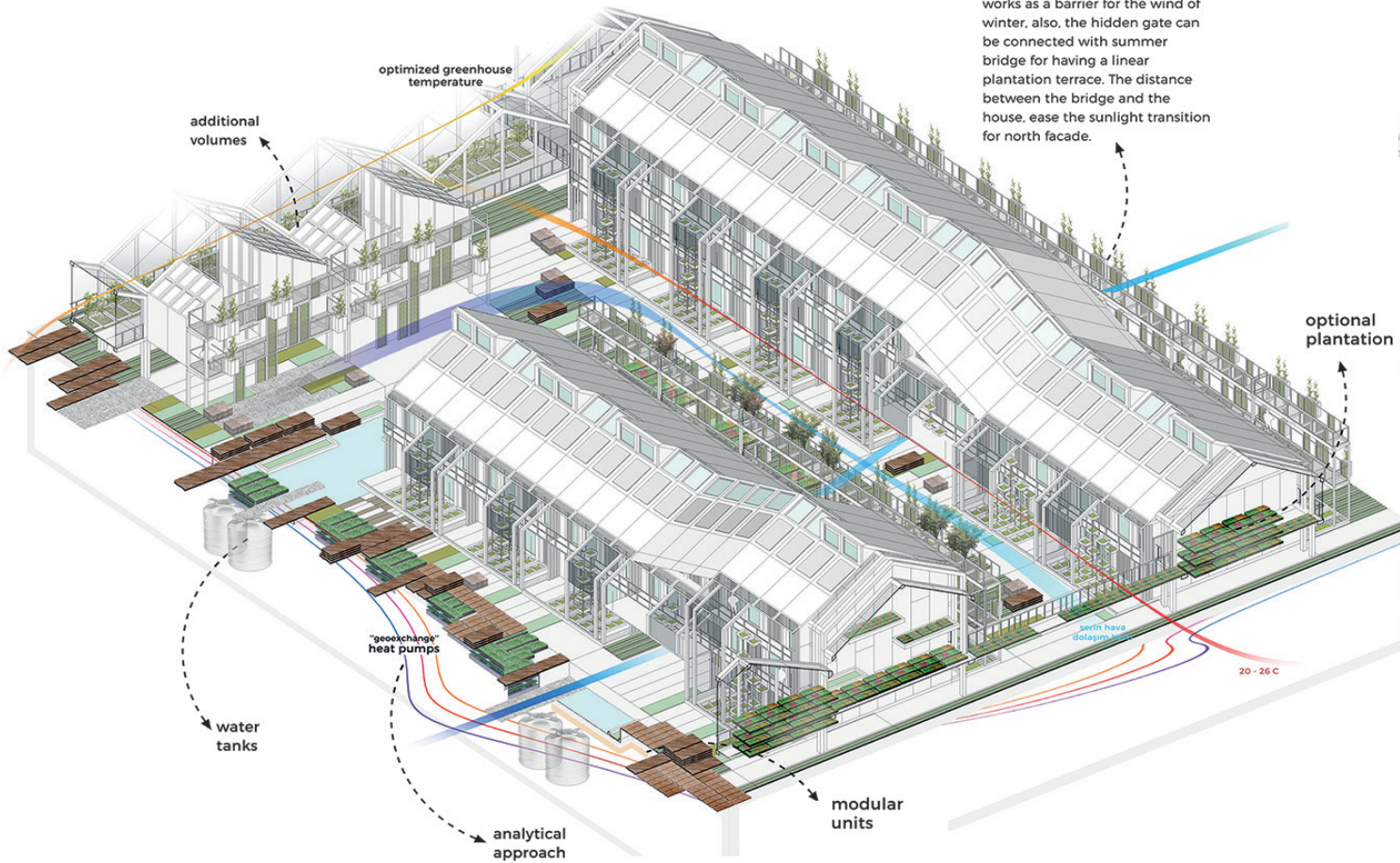
Minsk, Belarus



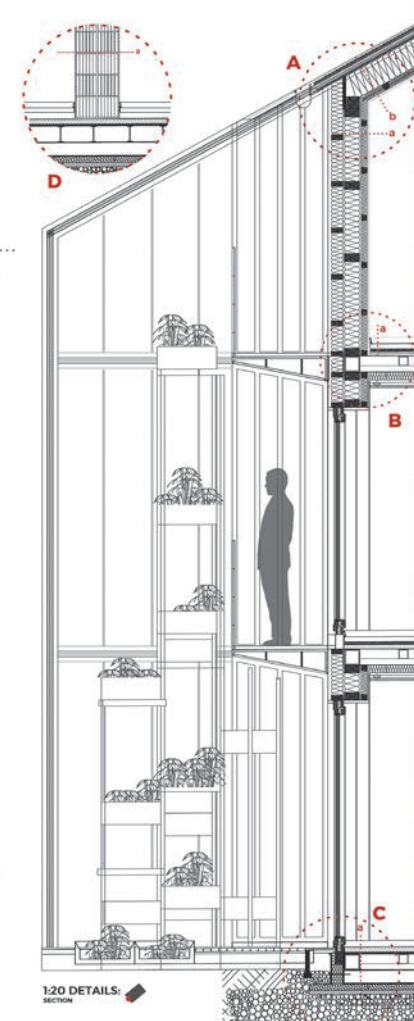
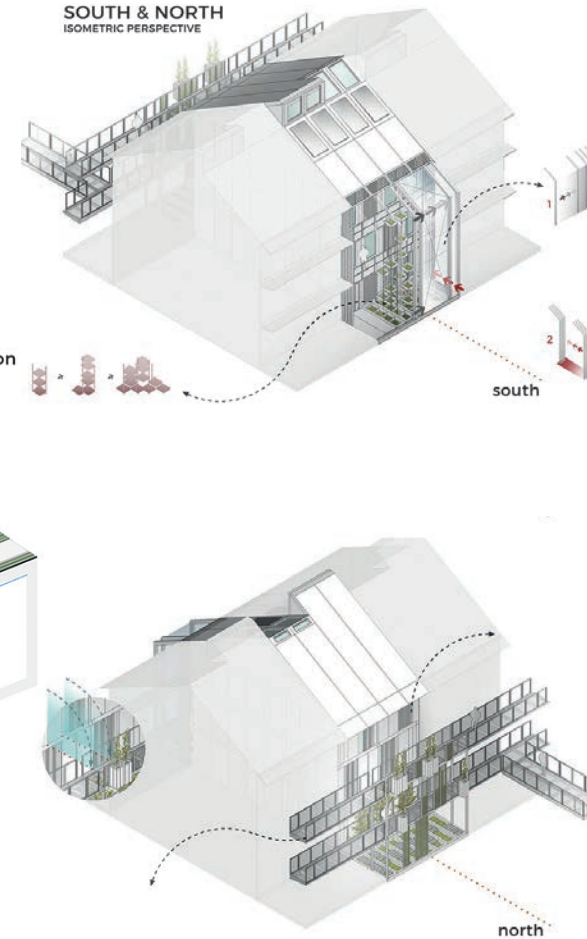
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SUSTAINABLE LINEAR SECTION: ADVANTAGES OF BEING THERMALLY INTROVERT



SOUTH & NORTH ISOMETRIC PERSPECTIVE



A. ROOF + WALL AGAINST AIR Monopitch roof structure (I-beam) Eaves

- Build-up a in cm**
- 2.5 Rigips Rigidur H double layer, each layer 12.5mm
 - 6.0 ISOVER Integra UKF 1-032 (wood 6/6 e=40cm, 13% wp)
 - ISOVER VARIO KM Duplex UV
 - 1.5 OSB board or chipboard
 - 16.0 ISOVER Integra ZKF 1-032 (wood 6/6 e=62.5cm, 14%wp)
 - 1.5 OSB board or chipboard
 - 12.0 Kontur FSP 1-032 Easy Fix 120 (wood 6/12 e=60cm, 12%wp)
 - 3.0 Rear ventilation
 - 1.0 Exterior cladding (e.g. wood, metal, plastic, stone)

- Build-up b in cm**
- Metal sheet covering
 - Separating layer
 - 2.4 Solid timber panelling
 - 5.0 Counter battens 5/8
 - ISOVER Integra ZUB underlay sheeting
 - 2.4 Solid timber panelling
 - 26.0 ISOVER Integra ZKF 1-032 F3I beam 38x58/260, e=80cm, 3% wp)
 - ISOVER VARIO KM Duplex UV
 - 6.0 ISOVER Integra UKF 1-032 (wood 6/6 e=50cm, 11% wp)
 - 2.5 Rigips Rigidur H double layer, each layer 12.5 mm

B. CEILING

- Build-up a in cm**
- Floor covering
 - 5.0 Screed
 - Vapour retarder and separating layers
 - ISOVER Akustic EP 3
 - 4.0 ISOVER Export EPS 100/035 as comp. for height of tube

C. GROUND

- Build-up a in cm**
- Floor covering
 - 5.0 Screed + Vapour retarder and separating layer
 - 3.0 ISOVER Akustic EP 3 040
 - 4.0 ISOVER Export EPS 100/035 as comp. for height of tube
 - 0.5 Sealing against moisture
 - 30.0 Separating pr. layer
 - 10.0 Styrodur CS
 - 10.0 Styrodur CS
 - 10.0 Styrodur CS
 - Granular subbase

D. WALL AGAINST NEIGHBOUR Partition wall, floor slab

- Build-up a in cm**
- 1.5 Interior plaster
 - 24.0 Vertically perforated brick HL2W
 - 2.0 ISOVER Akustic HWP2 smartpack
 - 24.0 Vertically perforated brick HL2W
 - 1.5 Interior plaster

Community Development in Brest, Belarus

Minsk, Belarus

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National Stage 2016



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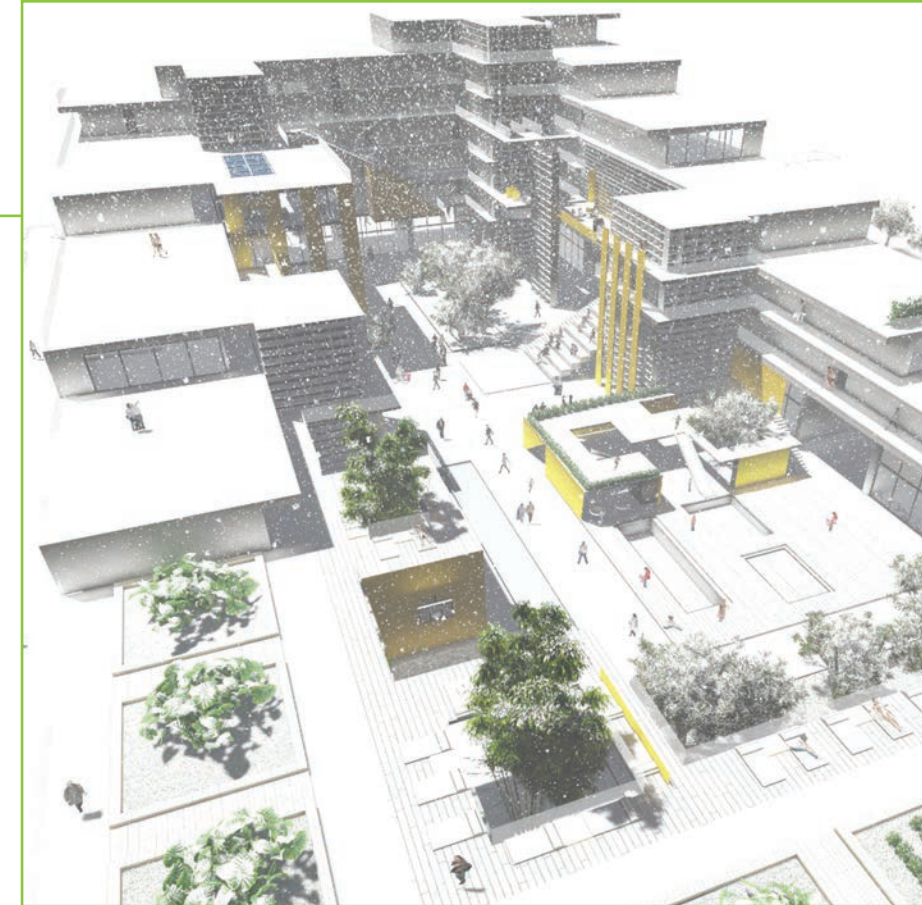
**AYCA
YAZICI**

Istanbul Technical University

Yildiz Technical University

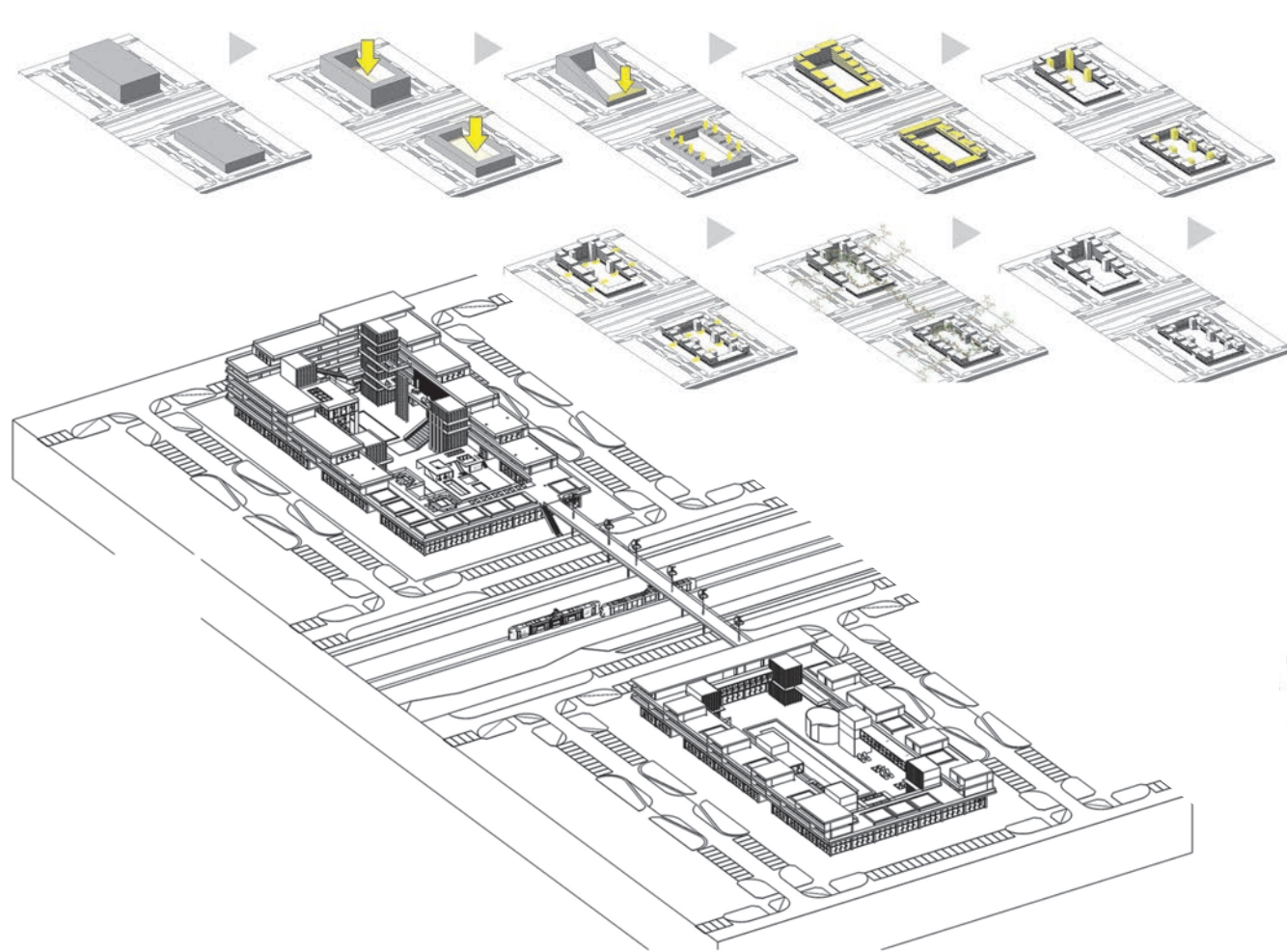


**FERHAT
BULDUK**



Special award

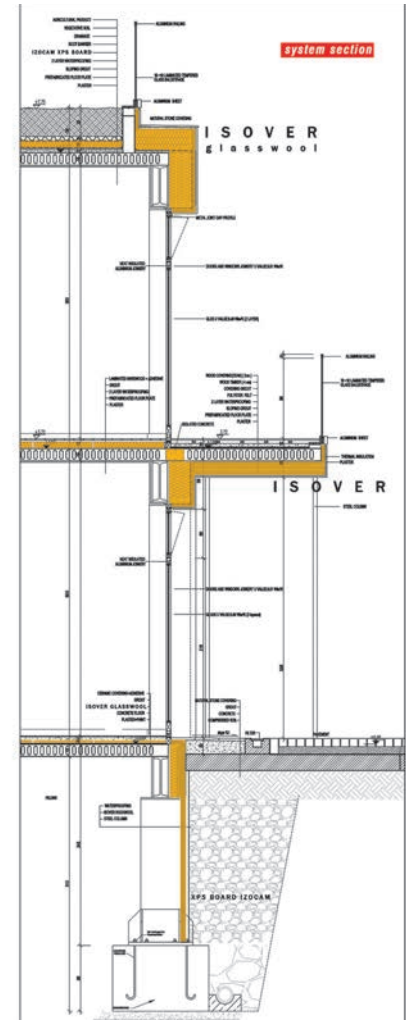
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Students Contest
International stage,
Minsk 2016



GROUND LEVEL



FIRST FLOOR LEVEL



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National Stage 2016



ONUR
KARADENIZ

Istanbul Technical University

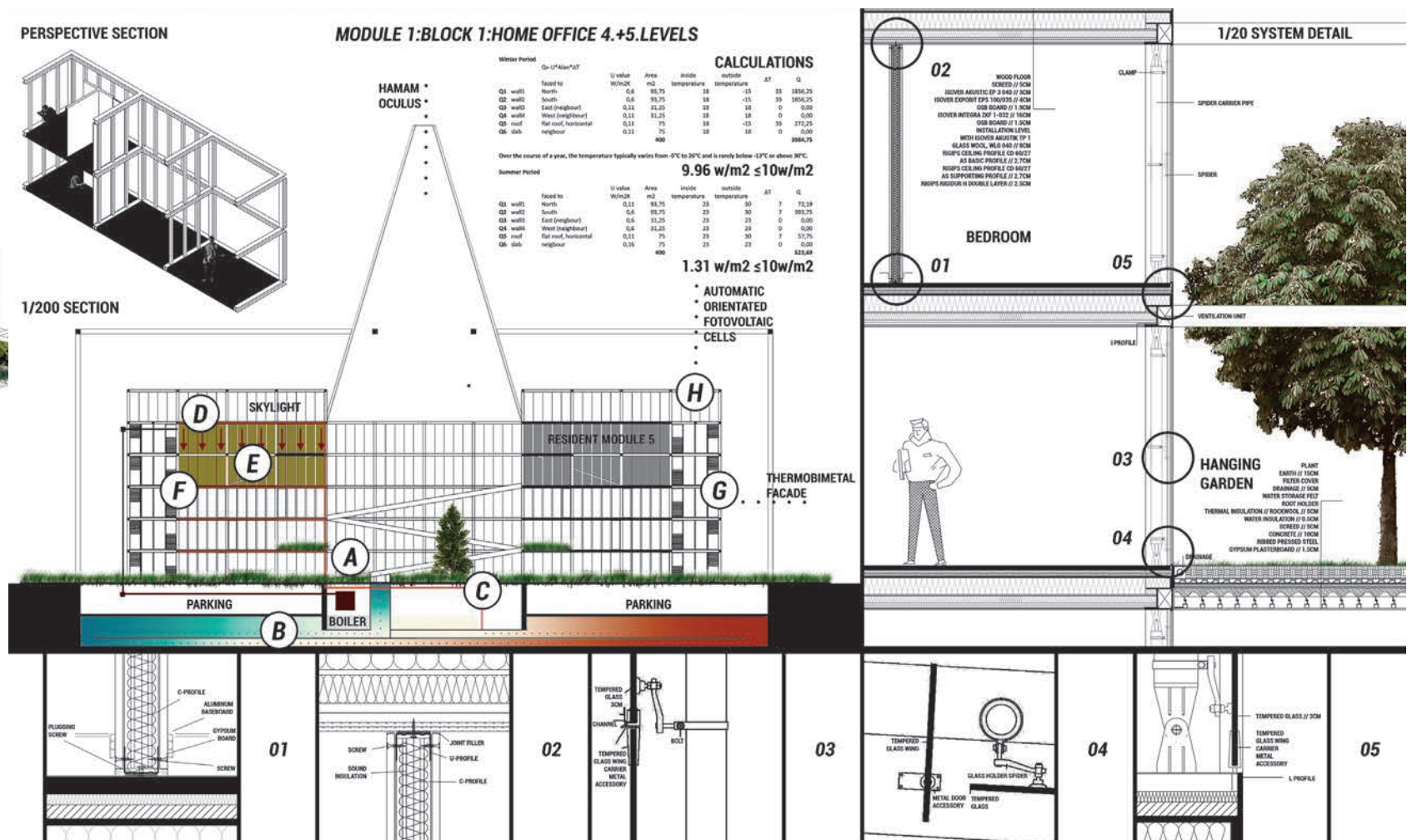
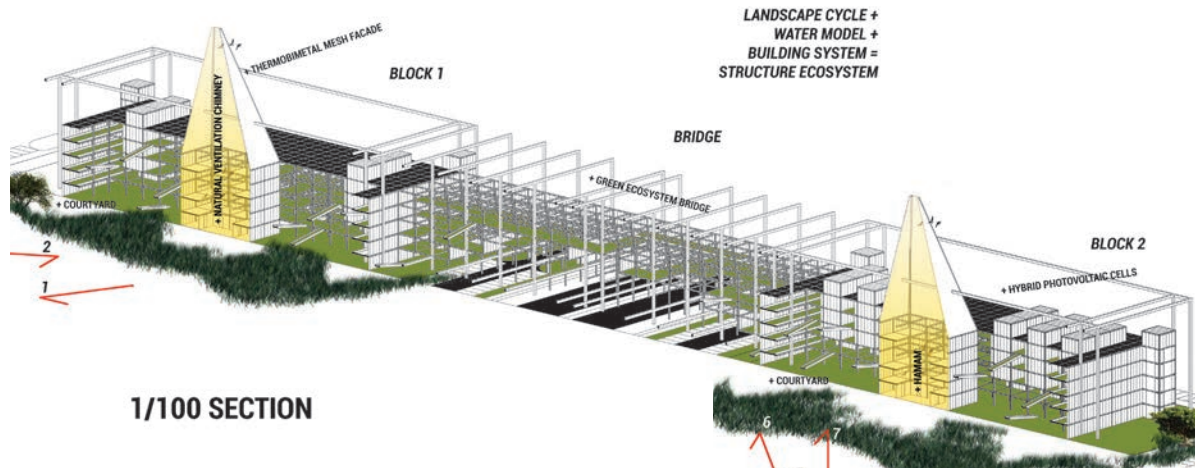
51

Community Development in Brest, Belarus

Minsk, Belarus



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PRIZE
UK
National Stage 2016



**ABDULQUADRI
ADEMAKINWA**



**LONG DUC
HOANG**

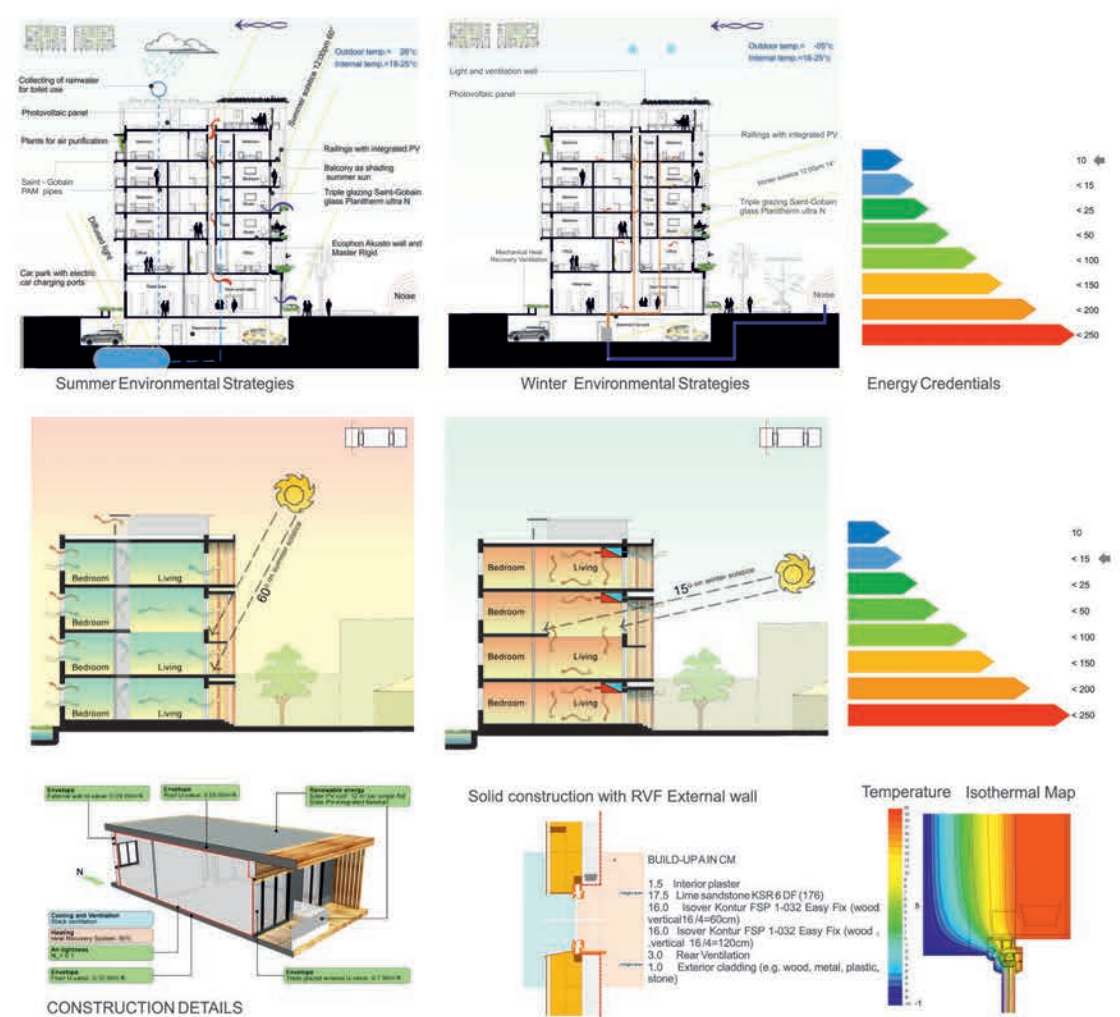
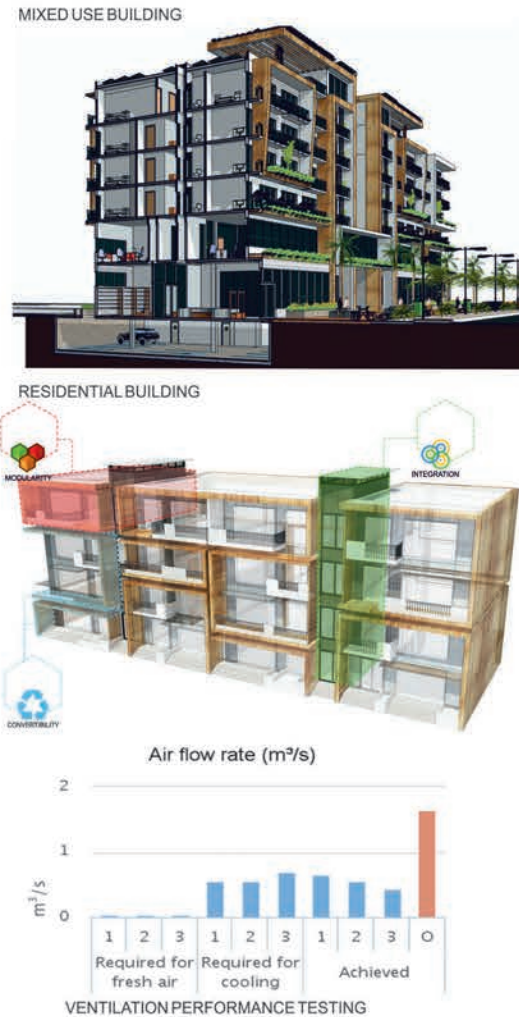
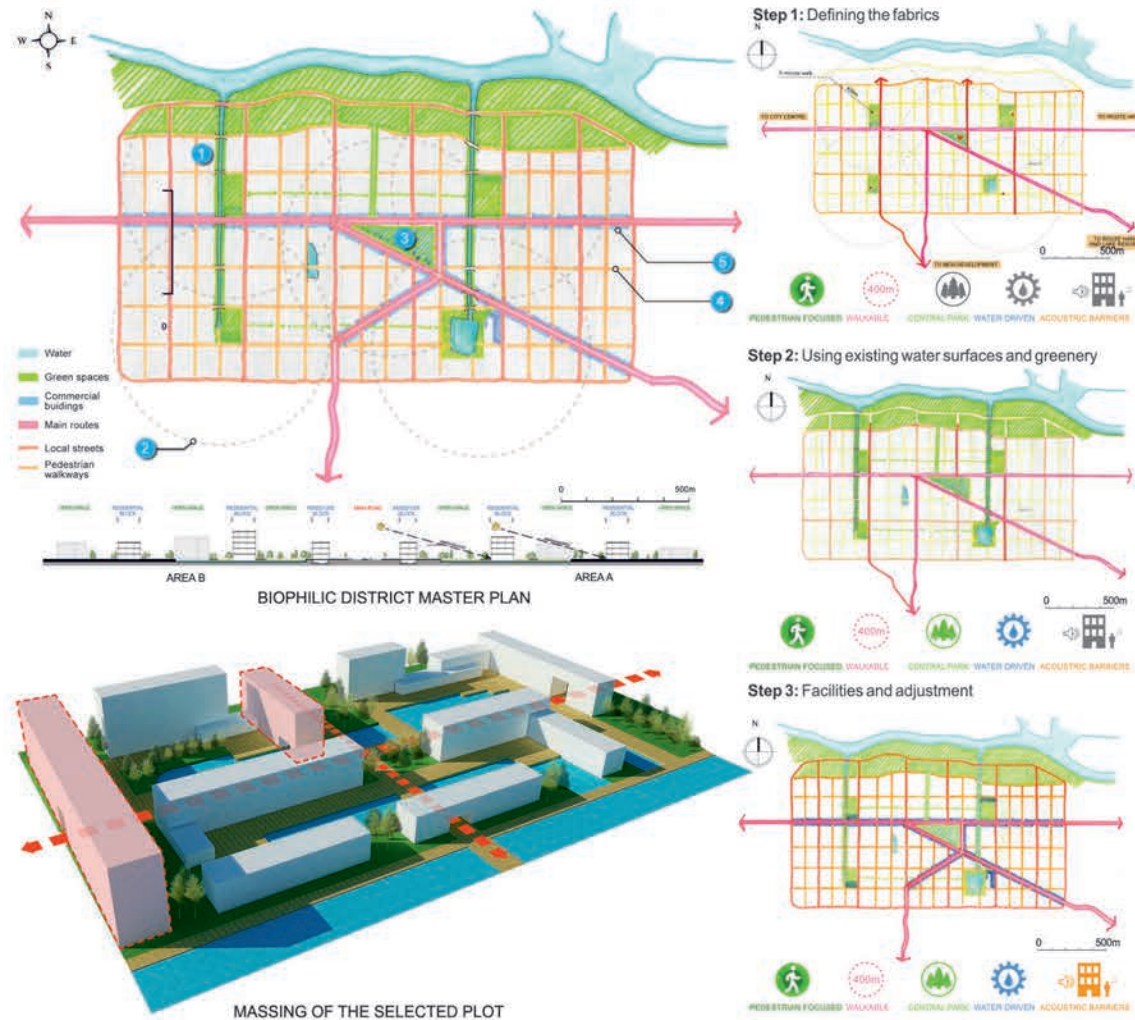
Nottingham University

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Community Development in Brest, Belarus Minsk, Belarus



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PRIZE
UK
National Stage 2016



**FENTY RATNA
INDARTI**



**WANG
LU**

Nottingham University

53

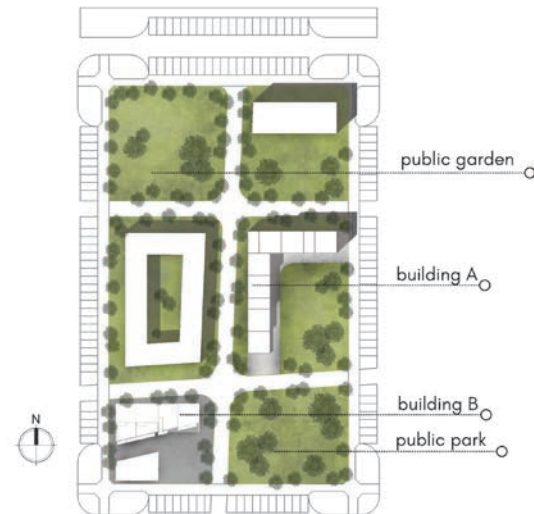
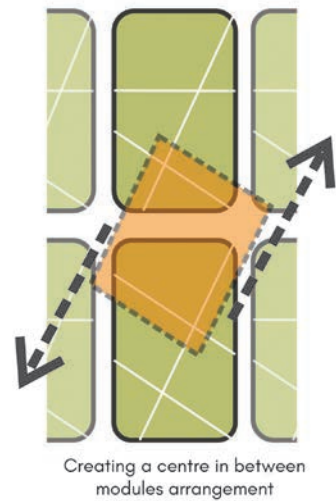
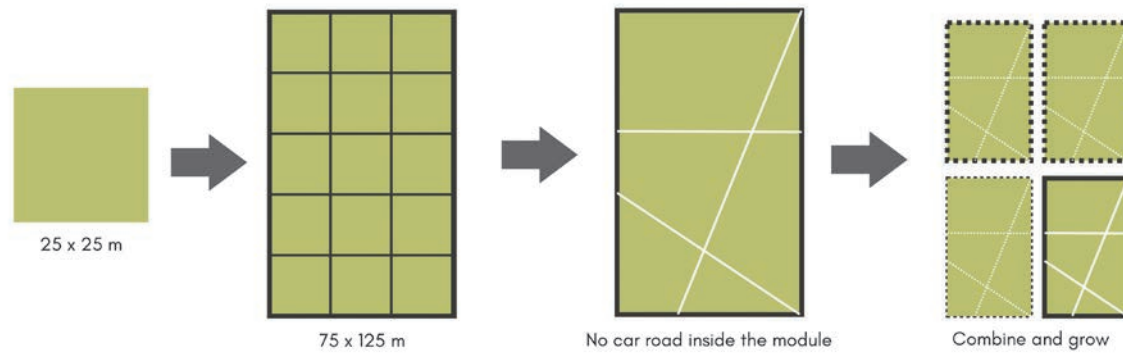
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Community Development in Brest, Belarus

Minsk, Belarus

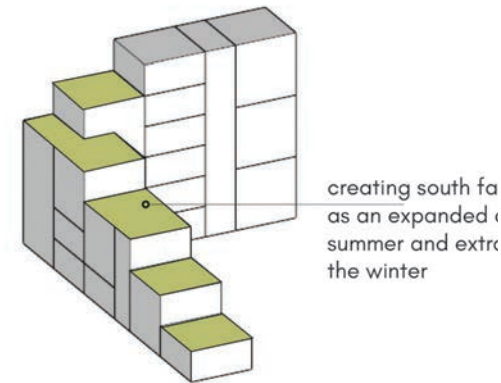
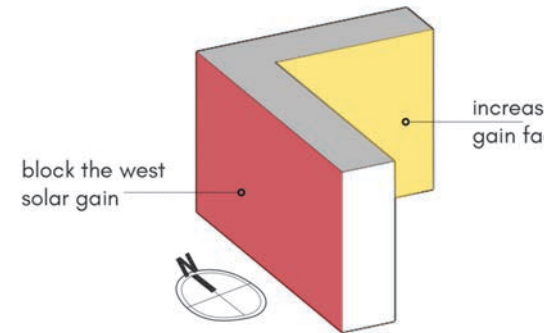


MODULE DEVELOPMENT

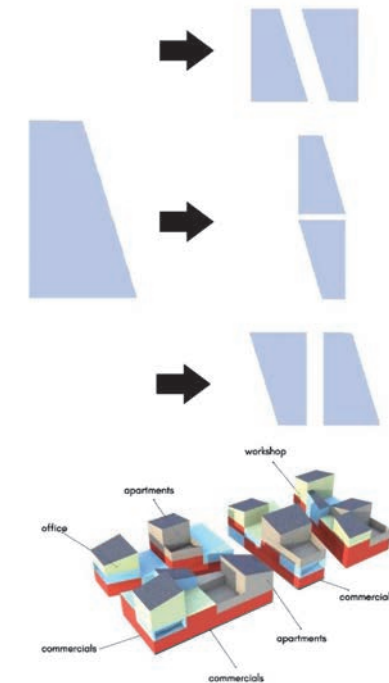
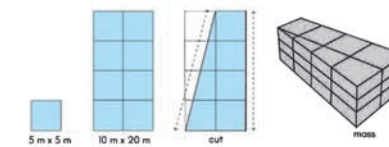


BUILDING DETAILS

BUILDING A

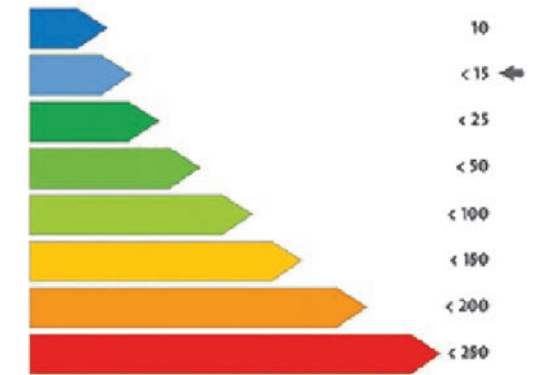


BUILDING B



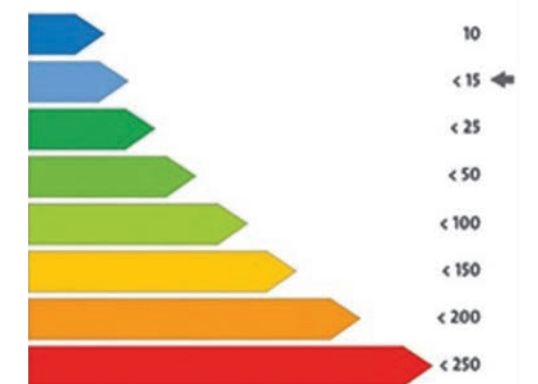
BUILDING A

Energy efficient classes



BUILDING B

Energy efficiency classes





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National Stage 2016



PRYIA
SINGH

Nottingham University



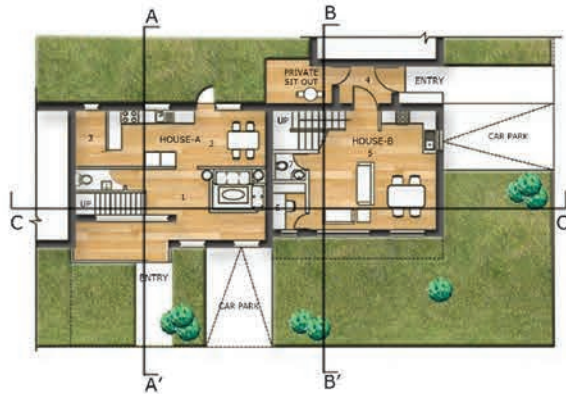
SOPHIA MADHI
GNANAPRAKASAM

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Community Development in Brest, Belarus

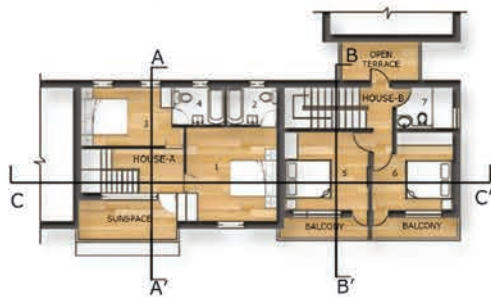
Minsk, Belarus





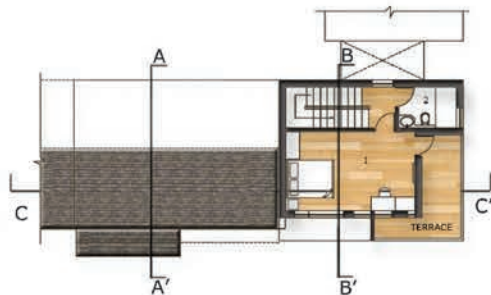
GROUND FLOOR

1. Living Room - 4 X 3.2 M
2. Kitchen/ Dining - 7 X 2.5 M
3. Utility - 1.4 X 2.5 M
4. Foyer - 2.4 X 1.7 M
5. Living/ Dining/ Kitchen - 5.7 x 5.4 M
6. Study- 1.5 X 2.1 M
7. Wc - 1.5 X 1.2 M



FIRST FLOOR

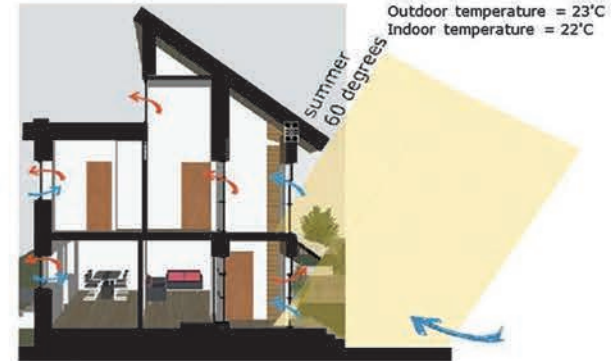
1. Bedroom - 3.9 X 4 M
2. Toilet - 2.2X 1.6 M
3. Bedroom - 4 X 2.6 M
4. Toilet - 2.2X 1.6 M
5. Bedroom - 3.7 X 3.45 M
6. Bedroom - 3.55 X 3.4 M
7. Toilet - 2.4X 1.8 M



SECOND FLOOR

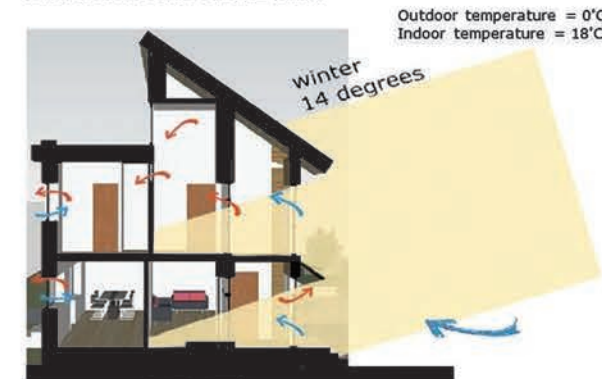
1. Guest Bedroom - 5.6 X 3.45
2. Toilet - 2.2X 1.8 M

SUMMER DAY TIME VENTILATION

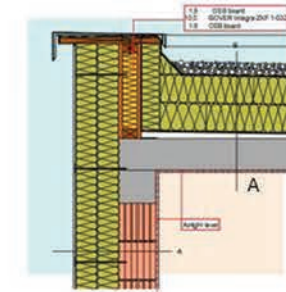


Section AA'

WINTER DAY TIME VENTILATION



Section AA'

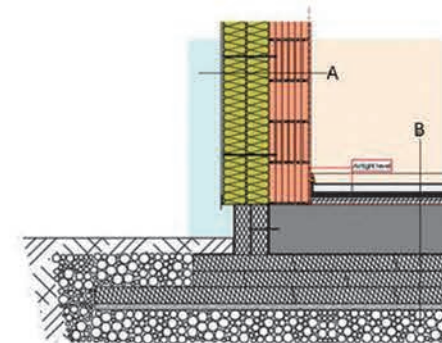


Cut A

- 80mm pebbles
- 8mm double layer roof and sealing sheeting, bond
- 180 ISOVER Exporit EPS 200/035 GDC
- 160 ISOVER Exporit EPS 200/035FD
- 200MM reinforced concrete ceiling
- 15mm interior plaster

Cut A

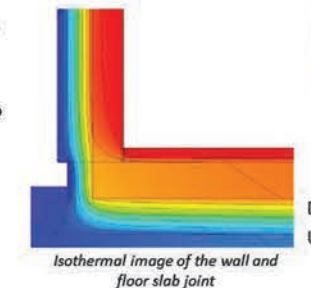
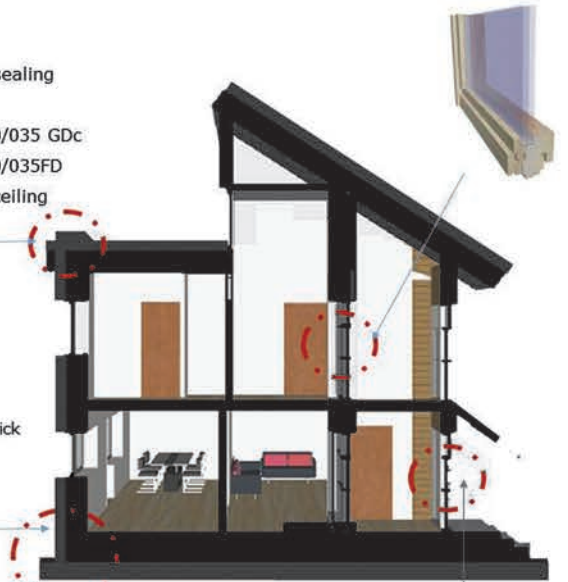
- 15 mm Interior plaster
- 240mm vertically perforated brick
- 140mm ISOVER sillatherm
- 160mm ISOVER sillatherm
- 15mm plaster



Cut B

- 50mm screed
- 30mm ISOVER Akustik EP 3 040
- 50mm ISOVER Exporit EPS
- 5mm Sealing against moisture
- 300mm Concrete foundation slab
- 120mm Styrodur CS
- 100mm Styrodur CS

Triple glazing
U-value = 0.7W/m2K

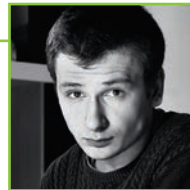


Double glazing
U-value = 1.0W/m2K

PRIZE
UKRAINE
National Stage 2016



**OKSANA
KONOVAL**



**OREST
YAREMCHUK**



**PAVLO
GOROKHOVSKIY**

55

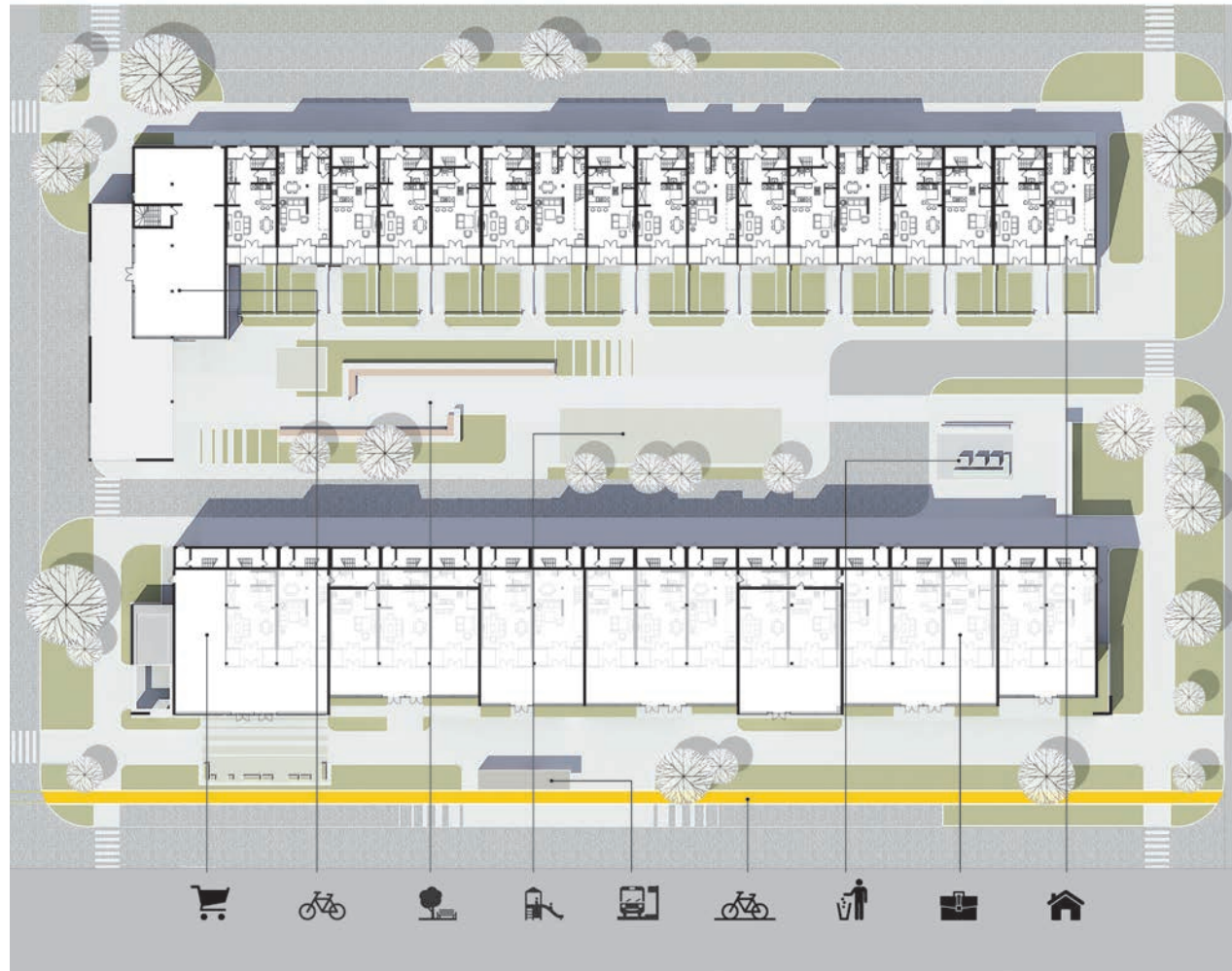
Kiev National University of Construction and Architecture

more information on www.isover-students.com

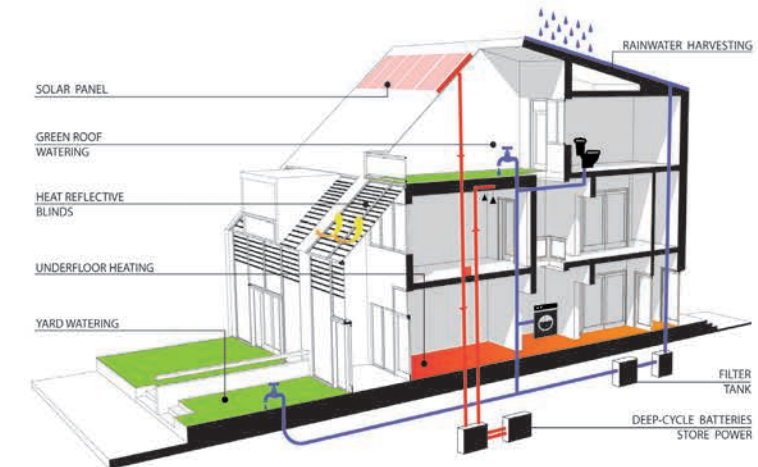
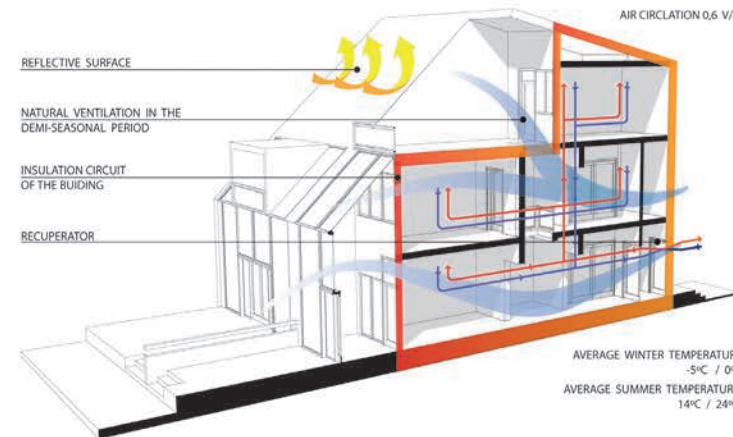
Community Development in Brest, Belarus

Minsk, Belarus





ENERGY PRINCIPLES:



CONSTRUCTIVE NODS

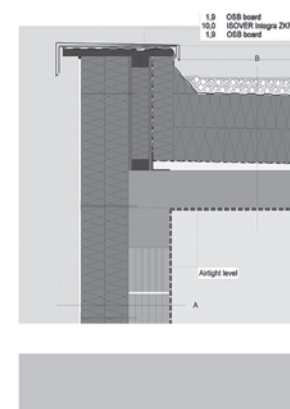
Detail 1

Build-up A in cm

- 1.5 Interior plaster
- 24.0 Vertically perforated brick HLZ
- 14.0 ISOVER Silla-therm WVP1-035
- 14.0 ISOVER Silla-therm WVP1-035
- 1.5 Thick plaster

Build-up B in cm

- 8.0 Pebbles
- 0.8 Double layer roof and sealing sheeting, bonded or scorched
- 18.0 ISOVER Metac FLP 1 Duratec
- 18.0 ISOVER Metac FLP 1 Duratec
- Vapour retarder
- Levelling layer, bit. perforated gl-mat sh.
- Preliminary coat bonding course
- Concrete laid at incl. of at least 2%
- 20.0 Reinf. concr. ceiling
- 1.5 Interior plaster



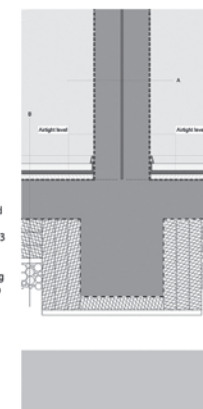
Detail 2

Build-up A in cm

- 1.5 Interior plaster
- 24.0 Vertically perforated brick HLZ
- 14.0 ISOVER Silla-therm WVP1-035
- 14.0 ISOVER Silla-therm WVP1-035
- 1.5 Thick plaster

Build-up B in cm

- 5.0 Floor covering
- 5.0 Screed
- Vapour retarder and separating layer
- ISOVER Akustic EPS 3
- ISOVER Export EPS 100/035
- 0.5 Antimoisture sealing
- 30.0 Concr. foundat. slab
- 10.0 Styrodur CS
- 10.0 Styrodur CS
- 10.0 Styrodur CS
- Granular subbase



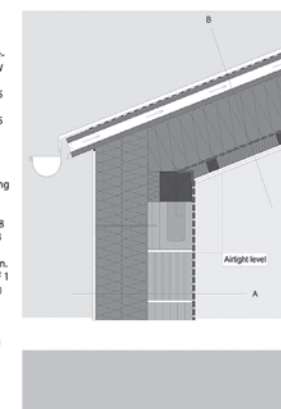
Detail 3

Build-up A in cm

- 1.5 Interior plaster
- 24.0 Vertically perforated brick HLZ
- 14.0 ISOVER Silla-therm WVP1-035
- 14.0 ISOVER Silla-therm WVP1-035
- 1.5 Thick plaster

Build-up B in cm

- Metal sheet covering
- Sealing sheeting
- 2.4 Solid timber panel
- 5.0 Counter battens 5/8
- ISOVER Integra ZUB underlay sheeting
- 2.4 Solid timber panel
- ISOVER Integra ZKF 1 032 (fl. beam e=50cm)
- ISOVER VARIO KM DUPLUX UV
- 6.0 ISOVER Integra UKF 1-032 (wood/6 e=50)
- 2.5 Rigips Rigidur H double layer, each layer 12.5 mm



Detail 4

Build-up A in cm

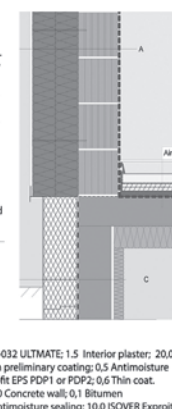
- 1.5 Interior plaster
- 24.0 Vertically perforated brick HLZ
- 14.0 ISOVER Silla-therm WVP1-035
- 14.0 ISOVER Silla-therm WVP1-035
- 1.5 Thick plaster

Build-up B in cm

- 5.0 Floor covering
- 5.0 Screed
- Vapour retarder and separating layer
- ISOVER Export EPS 100/035
- 3.0 ISOVER Akustic EP1
- 16.0 Reinf. concr. tiling
- 12.0 ISOVER Topdec DP
- 1-032 ULTIMATE

Build-up C, D in cm

- C: 6.0 ISOVER Topdec D 1-032 ULTIMATE; 1.5 Interior plaster; 20.0 Concrete wall; 0.1 Bitumen preliminary coating; 0.5 Antimoisture sealing; 20.0 ISOVER Export EPS PDP1 or PDP2; 0.6 Thin coat.
- D: 1.5 Interior plaster; 20.0 Concrete wall; 0.1 Bitumen preliminary coating; 0.5 Antimoisture sealing; 10.0 ISOVER Export



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**ANN
HOTS**



**LEONILA
RUDENKO**



**ULIANA
SANDY**

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Lviv National Polytechnic University

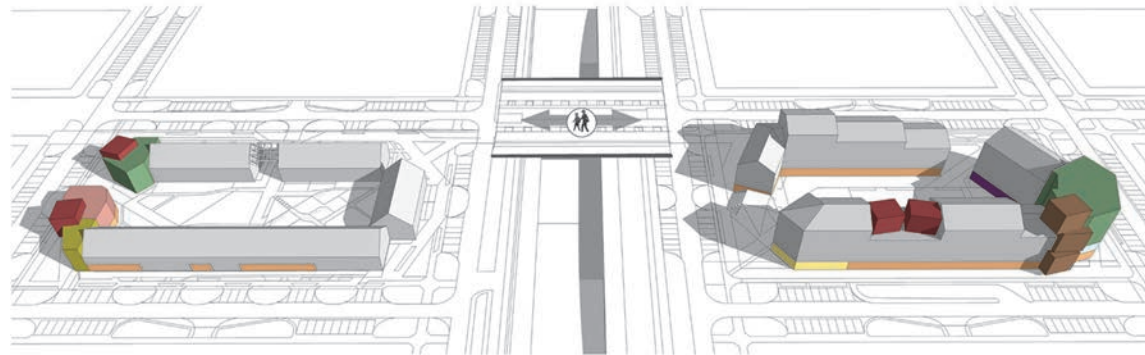
more information on www.isover-students.com

Community Development in Brest, Belarus

Minsk, Belarus

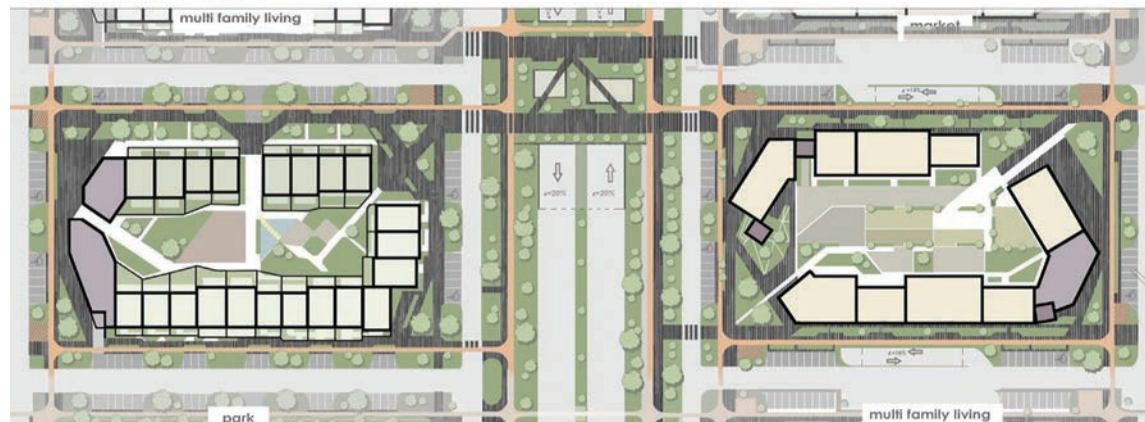


FUNCTIONAL ZONING

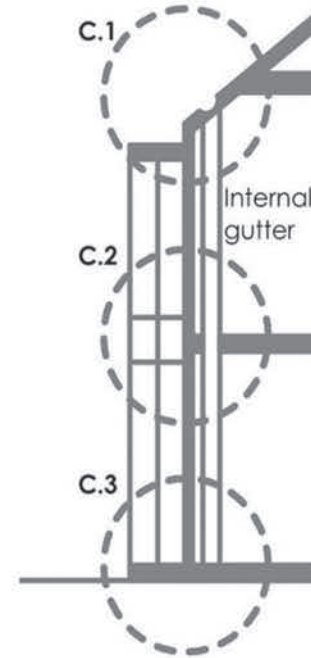


- | | | |
|-------------|----------------|-------------------------|
| Residential | Educational | Business and production |
| Shopping | Cultural | Medical |
| Sports | Administrative | Recreational |
| | Entertainment | |

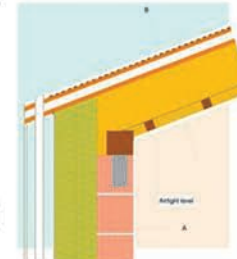
MASTER PLAN



ROOD & WALL



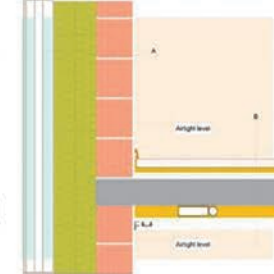
C.1 Pitched roof/mono pitched



Cut B Info

- | | |
|------|---|
| 0.0 | Metal sheet covering |
| 0.0 | Separating layer |
| 2.4 | Solid timber panelling |
| 5.0 | Counter battens 5/8 |
| 0.0 | ISOVER Integra ZUB underlay sheeting |
| 2.4 | Solid timber panelling |
| 26.0 | ISOVER Integra ZKF 1-032(FJI beam 38x58/260, e=80cm, 3% wp) |
| 0.0 | ISOVER Vario KM Duplex UV |
| 6.0 | ISOVER Integra UKF 1-032(wood 6/6 e=50cm, 11% wp) |
| 2.5 | Rigips Rigidur H double layer, each layer 12.5 mm |

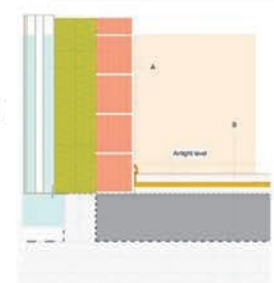
C.2 Wall against air



Cut A Info

- | | |
|------|----------------------------------|
| 1.5 | Interior plaster |
| 24.0 | Vertically perforated brick HL2W |
| 20.0 | ISOVER Sillatherm WWP 1-035 |
| 20.0 | ISOVER Sillatherm WWP 1-035 |
| 1.5 | Thick plaster |

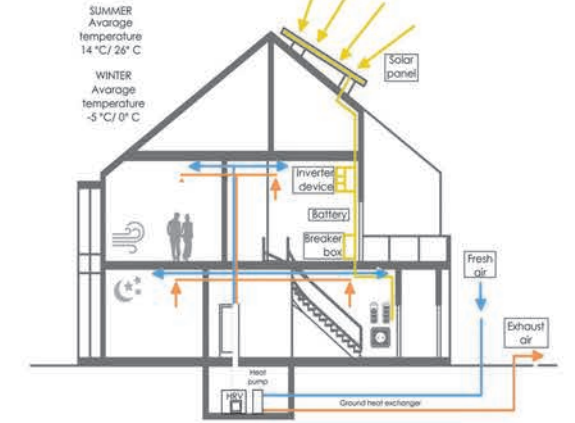
C.3 Slab against ground



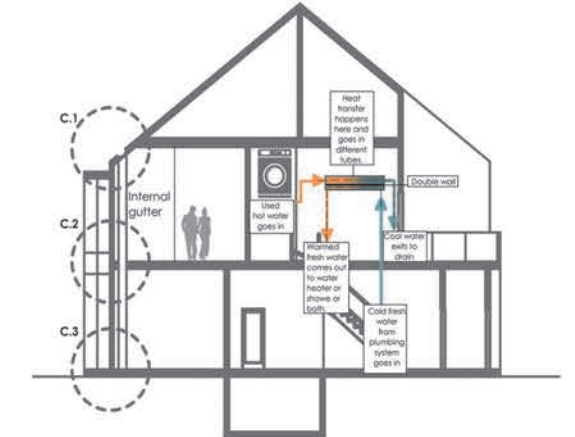
Cut B Info

- | | |
|------|---|
| 0.0 | Floor covering |
| 5.0 | Screed |
| 0.0 | Vapour retarder and separating layer |
| 4.0 | ISOVER Akustik EP 3 040 |
| 5.0 | ISOVER Export EPS 100/035as comp for h. of tube |
| 0.5 | Sealing against moisture |
| 30.0 | Concrete foundation slab |
| 0.0 | Separating layers |
| 20.0 | Styrodur CS |
| 20.0 | Styrodur CS |
| 10.0 | Styrodur CS |
| 0.0 | Granular subbase |

HEAT RECOVERY



DRAIN WATER HEATING





III PRIZE
UKRAINE
National Stage 2016



KATERYNA
RYBENCHUK



MARIIA
RYBENCHUK

Lviv National Polytechnic University

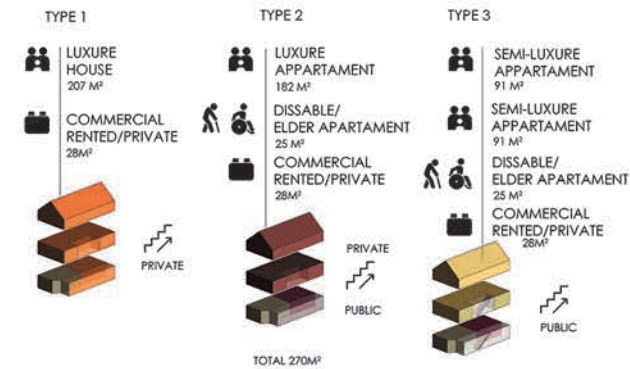
57

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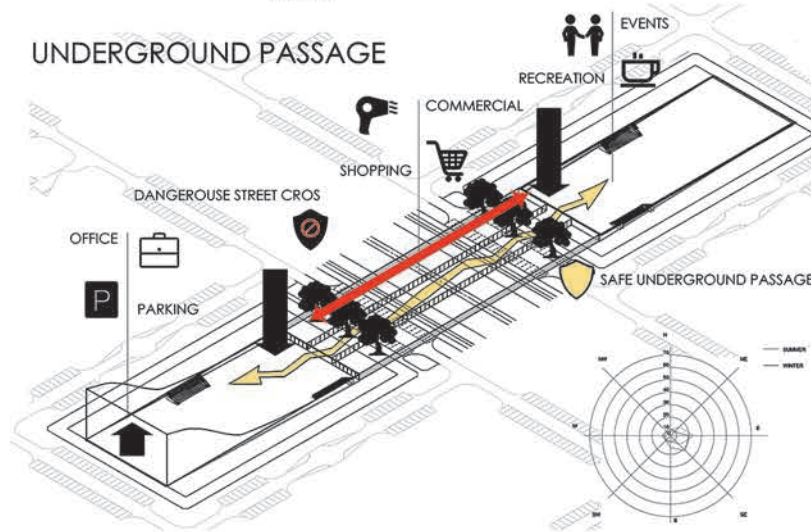
Minsk, Belarus



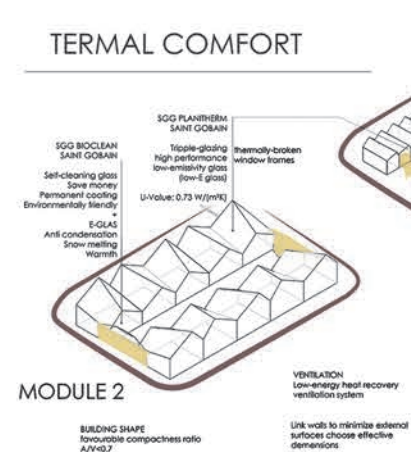
FUNCTIONAL ZONING OF MODULE 1&2 PROGRAM OF MODULE 1



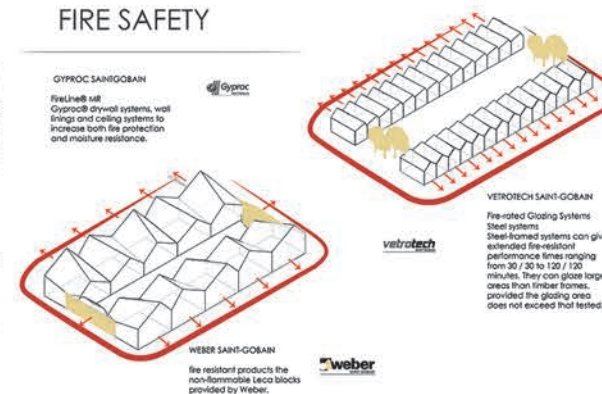
UNDERGROUND PASSAGE



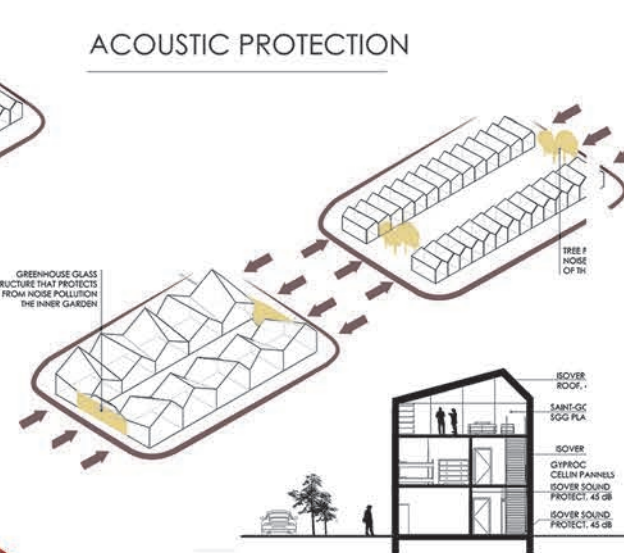
TERMAL COMFORT



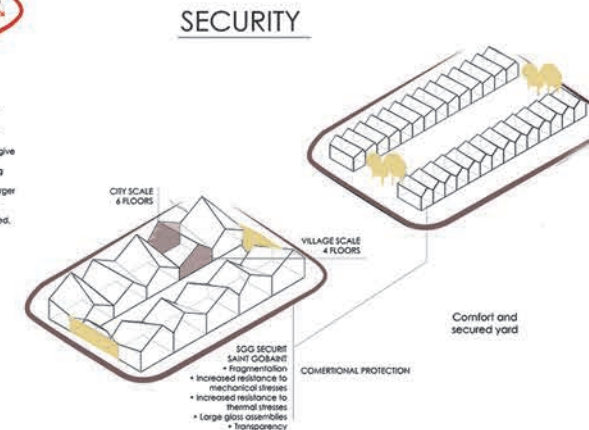
FIRE SAFETY



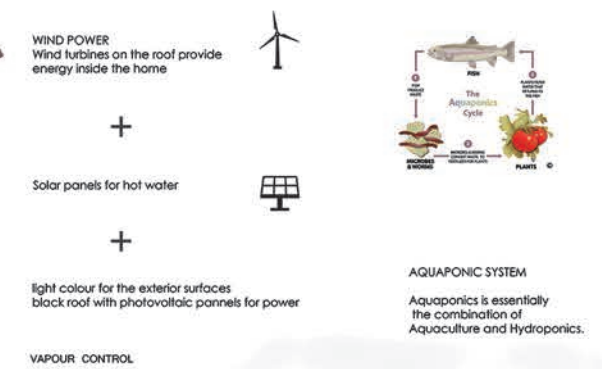
ACOUSTIC PROTECTION



SECURITY



ENERGY SUPPLY



MULTI-COMFORT DESIGNER: CALCULATION FOR A TOWER WITH 8 FLOORS - OVERVIEW PALETTE

- PROJECT DATA

Object: townhouse (row house)

Climate zone: Belarus

Construction: New Building

Building Type: Residential

Usage: For living

Design Temperature: 20.00°C

- AREA INPUT

Sum of living area: 7990.00 m²

Sum of Heated Space Volume: 21312.00 m³

- ENVELOPE- OPAQUE ELEMENTS (Average U-Values)

Wall against air: 0.11

Wall against ground: 0.17

Slab against ground: 0.10

Pitched Roof: 0.11

- ENVELOPE- WINDOWS AND DOORS (Average U-Values)

Windows: 0.73

Doors: 0.80

- QUALITY

Airtightness rate: 0.60

Thermal Bridge Free: Yes

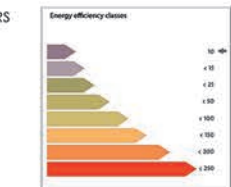
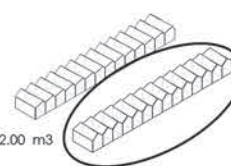
- MEAN SHADING FACTORS

North 0°: 0.70

South 180°: 0.70

West 270°: 0.70

East 90°: 0.70



- OVERHEATING PARAMETERS

Kind of Construction: Massive

Max. admitted interior temperature: 25

SUMMER VENTILATION STRATEGY

Summer Air Exchange Rate

Natural Ventilation Losses 0.2

Mechanical Ventilation Losses 0.4

- HVAC

Heat Recovery System: 95.00 %

Subsoil Heat Exchanger

Efficiency: 33.00 %

Length: 80 m

- CALCULATIONS

Transmission Heat Losses: 89111.67 kWh/c

Ventilation Heat Losses: 112184.20 kWh/a

Total Heat Losses: 201295.88 kWh/a

Internal Heat Gains: 87787.73 kWh/a

Solar Heat Gains: 54144.18 kWh/a

Total Heat Gains: 133615.55 kWh/a

Annual Heat Demand: 67680.33 kWh/a

Specific Heat Demand: 8.47 kWh/(m²a)

- Overheating Calculations

Exterior Thermal Transmittance: 817.74 W/K

Ground Thermal Transmittance: 133.20 W/K

Ventilation Transmission Ambient: 1406.59 W/K

Ventilation Transmission Ground: 0.00 W/K

Solar Aperture: 188.93 m²

Frequency of Overheating: 0.00 %

ISOVER Multi-Comfort House Students Contest

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- Multi-Comfort House
- Downloads
- Past contests



Welcome to the homepage
of the international ISOVER Multi-Comfort
Students Contest!

The objective of the competition is to integrate a creative approach to the concept of energy-efficient construction at the passive-house level. Therefore, the task is to design or renovate a building according to the ISOVER Multi-Comfort House definition, which means that high thermal performance, acoustic comfort classes and fire protection requirements have to be considered.

In recent years the ISOVER Contest for architecture students developed from a regional event to an international forum for students and professors.

The competition has become very popular because it gives the participants the opportunity to meet, discuss, and compare their work with international colleagues. The growing interest in the ISOVER Students Contest provides us with the opportunity and the privilege to welcome new participating countries and universities each year.



www.isover-students.com

All the relevant information since 2005: all participants and their projects, video recordings of the presentations and contest tasks, documentation, literature, photo gallery