SAINT-GOBAIN

Multi Comfort
BY SAINT-GOBAIN

Urban Regeneration of a community
Madrid, Spain

MULTI**COMFORT** HOUSE STUDENTS CONTEST

13th International Stage – Madrid 2017

ISOVER SAINT-GOBAIN

MADRID

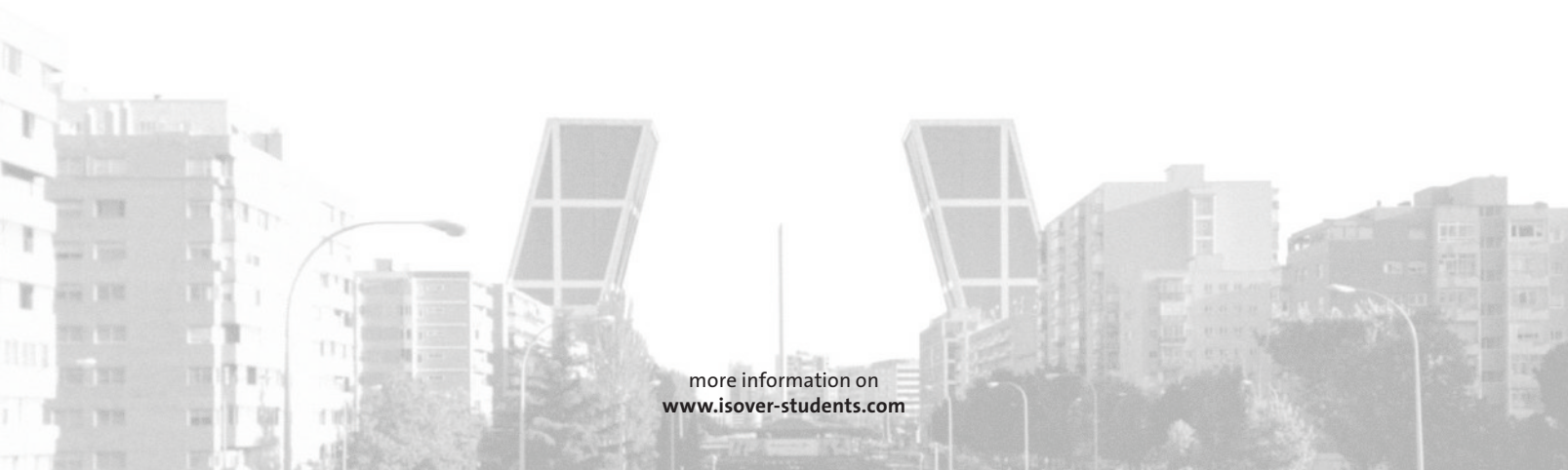
IZOCAM

Ecophon SAINT-GOBAIN

SAINT-GOBAIN

Madrid, Spain 31 May-2 June 2017

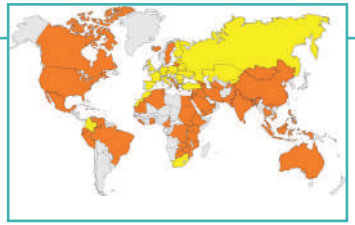
Willkommen!
Сардэчна запрашаем!
Добре дошли!
Dobro došli!
Vítame Vás!
Tere tulemast!
Tervetuloa!
Кош келдіңіздер!
Добро пожаловать!
Ласкаво просимо!
Hoşgeldiniz!
Laipni lūgti!
Sveiki atvykę!
Bine ati venit!
Vítáme vás!
Dobrodošli!
Bienvenido!
Bienvenue!
Welkom!
Welcome!
Witamy!



more information on
www.isover-students.com

Content

Introduction



*Participating countries to final stage of MULTI**COMFORT** HOUSE STUDENTS CONTEST EDITION 2017.*

HISTORY

MULTI**COMFORT** House Competition 2017 has taken place in Madrid between 31th of May - 2nd of June and reached its 13th edition. More than 1800 students registered for this year edition representing over 200 Schools of Architecture and Building Sciences from 90 countries. The event, which was held at the Crystal Gallery-Palacio de Cibeles, has been attended by about 250 people, including students, teachers, architects and authorities

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

“In this contest the professional careers of many architects have been measured to make better cities and a better world. They have demonstrated a clear commitment to sustainability”, Madrid Mayor.

ASSIGNMENT

This year task, which has been coordinated by the Isolation activity of Saint-Gobain, Isover, has the collaboration of the Sustainable Urban Development Area of the Madrid City Council and the San Blas Area. The participants have designed their projects for the urban regeneration of a community within the perimeter of the Gran San Blas area of Madrid, following the MULTI**COMFORT** House criterion of Saint-Gobain. That is, taking into account that it is sustainable (including environmental, economic and social factors), that provides high thermal comfort, offering excellent acoustic comfort, visual comfort, indoor air quality, and fire and safety protection. In addition, they have also had to respect the MAD-RE (Madrid Recupera) plan established by the Town Planning Area of the Madrid City Council.

FINAL STAGE

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

For the members of the jury:

- Ms. Maria Del Pilar Pereda Suquet – Sustainable Urban Development Area Advisor, Madrid City Council
- Ms. Raquel Del Rio Machin – Sustainable Urban Development Area Advisor, Madrid City Council
- Mr. Slawomir Szpunar – International Marketing Director, Saint-Gobain Group, France
- Mr. Leif Andersson – International Manager - Innovation & Solutions, Saint-Gobain Insulation Activity, France
- Mr. Roland Matzig – Architect, RMP Architects, Germany
- Mr. Nicolas Maruri González de Mendoza – Architect, Maruri Architects, Spain
- Mr. Francisco Rojas Rivadulla – Architect, 1st Prize winner MCH Students Contest Spain 2010

*Participants in the MULTI**COMFORT** HOUSE STUDENTS CONTEST 2017 International Stage*

International Winners 2017

During the second day, each of the 53 students teams, from 30 countries, representing more than 30 different nationalities, had the opportunity to present their concept design and ideas in front of the jury and all participants, as well as friends and colleagues, that were watching them on-line, as the event was live streamed.

The awarding ceremony was held on the 3rd day of the competition at the Crystal Gallery-Palacio de Cibeles in the presence of Major of Madrid, Manuela Carmena, and the Chairman and CEO of Saint-Gobain, Pierre-André de Chalendar. The ceremony was attended by about 250 people, including students, teachers, architects and authorities.

INTERNATIONAL WINNERS 2017

- **1ST PRIZE**: AIVA DORBE,LAUMA KALNINA from Riga Technical University, Latvia
- **2ND PRIZE**: ALINA HOLOVATIUK from KNUCA, Ukraine
- **3RD PRIZE**: ANNIKA LAIDROO, PRIIT RANNIK from Tallinn University of Technology, Estonia

Honorable mention:

- EMA KIABOVÁ, ROMAN RUHIG from Slovak University of Technology in Bratislava, Slovakia

Students prize:

- LAURA IVANE, INESE GUSTA from Riga Technical University, Latvia

Winners of the 1st Prize: Aiva Dorbe & Lauma Kalnina awarded by Major of Madrid, Manuela Carmena, and Chairman and CEO, Pierre-André de Chalendar

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 deportment) 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'.

KLIMENT IVANOV

Bulgaria

Kliment Ivanov is a Bulgarian architect who works in the fields of architectural design, scientific research and academic teaching. In 2000 he had a Master's degree in Architecture from the University of Architecture, Civil Engineering and Geodesy in Bulgaria. In 2005 he founded his own architectural practice Kliment Ivanov Architects. The practice is actively involved with architectural, interior and product design, and is internationally acknowledged by numerous awards. In 2014 Kliment Ivanov had a PhD in Architecture from the New Bulgarian University. He specialises in the field of renovation and adaptive reuse of buildings. He is an Assistant Professor and a Programme Consultant in the Masters Programme of Architecture in the New Bulgarian University.

TSVETA ZHEKOVA

Bulgaria

Tsveta Zhekova is a Bulgarian architect who works in the fields of architectural design, scientific research and academic teaching. In 1997 she had a Master's degree in Economics from the University of Economics in Varna and in 2012 – a Master's degree in Architecture in Varna Free University. In 2015 Tsveta Zhekova had a PhD in Varna Free University and she started teaching as an Assistant Professor of Industrial and Transport buildings, Building Energy efficiency and Building Information Modeling (BIM). She is specialized in the field of sustainable design of intermodal passenger buildings, bioclimatic architecture and renewable energy sources.

ARCH. MSC. ANTONIO OLMOS HERNANDEZ — Columbia

Architect by the Universidad Del Atlántico, Barranquilla. (1996) where he meets with honorary thesis and mention of honor of S.C.A. For being a distinguished student during his university studies.
In the year 2001 he travels to the city of Barcelona, Spain, where he resided for 10 years, having practiced there, after homologating his title Colombian, to the Spanish of Superior Architect and to have registered in COAC - Catalonian Official College of Architects, until 2011. He also completed his post-graduate studies in the building construction department of the Universidad Politecnica de Cataluña, UPC. (Master in architecture technology and currently the PhD on the same line)
He has been lecturer and guest lecturer at universities; Universidad Nacional de Colombia - Medellin, Eafit University, Universidad Del Valle, Universidad Del Atlántico, and the Colombian Society of Architects, among others.
Since 1998, he has been a consultant for residential, institutional, urban and landscape projects in Colombia and Spain. At present, he is a researcher in the areas of sustainable construction and projects, at the School of Architecture, Urbanism and Design of the Universidad Del Norte, in Barranquilla.
He directs the project for the new FAB-LAB or laboratory of digital Fabrication, and EDISOST lab, where he also investigates the thermal behavior of buildings envelopes, and about the use of the wind in the constructions of the Caribbean coast.

PROFESSOR LJUBOMIR MIŠČEVIĆ D.I.A. — Croatia

Born in 1954 and graduated from the Faculty of Architecture in Zagreb in 1979. Since 1979 has been working in the Institute of Architecture and as an associate at the Department of Architectural Design. Since 1991 has been teaching Energy and Ecology Architecture. He became a senior lecturer in1994/95 and an assistant professor in 1996/97. Since 1997/98, has been a supervisor for Graduation thesis courses and in 1999/00 the head for courses in Integral Work. Completed the post-graduate program in Urban and Physical Planning in 1982; registered scientist. He attended a specialist seminar in Architecture and Practical Design in Lisbon in 1993: EU DG XVII. Since 1985 has been engaged in the Croatian project Passive Solar Housing Architecture and in international research projects in Energy and Ambience Rehabilitation in Housing. He received awards from the Croatian State Administration of Environmental Protection in 1995 and from Ford Motor Company for the protection of nature and cultural heritage in 2000. Since 2000, has been head of the International Summer School of Architecture in Motovun. Chairman of the Association of Zagreb's Architects from 2001-2005.

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 Archtects (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 Colledge, 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.

IRINA RAUD

Estonia

Born in Tallinn, Estonia, studied architecture at Academy of Arts (ERKI), department of Architecture.
1969 – 1989 Worked as architect in state office Eesti Projekt, most important works: theatre Ugala in Viljandi, detail plan for Tallinn city center.
1989 – 1991 Vice Mayor of Tallinn and Tallinn Chief Architect Since 1992 she owns and runs her architectural office R-KONSULT.
During all the years she has maintained a focus on urban planning, architectural and design projects. Her works started from very big scale to small details, following the projects from idea to realisation, like passenger terminals in Tallinn, Paldiski and Ventspils, several office buildings, apartment houses, theatres in Viljandi and Tallinn ect.
Since 1973 she is a member of the Estonian Union of Architects, from 1993 Member of the German Academy of Urban Construction and Planning since 1993. From 1996 she is a Member of the German Academy of Arts in Berlin.
Since 2012 Irina Raud is a guest professor at Tallinn University of Technology and in 2013-2016 was elected as the Head of Architecture and Urban Design Department.

LECTURER JAAN KUUSEMETS

Estonia

He was born in 1979 in Kärdla, 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 environnemental issues for the monthly architecture magazine AMC Le Moniteur from 2007 to 2010.
Since 2006 teacher at the architecture school ENSA Paris Malaquais

PROF. DIPL.-ING. HENNING M. BAURMANN — Germany

Born in 1965, studied architecture and art history at Karlsruhe Institute of Technology at Fritz Haller (Suisse) and Ottokar Uhl (Vienna), Diploma 1991. Founded his own office in 1994 and won many competitions and awards for realizations in design and architecture. In 1996, he became assistant of Arno Lederer at KIT, later lecturer at different german universities, in 2008 assistant professor for building technology and in 2010 full professor of building construction and technology at the University of applied sciences Darmstadt. Since 2016, B. is dean of the department of architecture and interior design.

PROF. GIANCARLO PAGANIN — Italy

Giancarlo Paganin, BSc MSc in civil engineering, PhD in building engineering.
Associate Professor of "technological design of architecture" at Politecnico di Milano, where he teaches courses in different Master of Science in the School of Architecture Urban Planning Construction Engineering. Member of University Assessment Commission of Politecnico di Milano.
His research activity is developed within the Department of Architecture and Urban Studies (DASTU) focusing, in particular, on the issues relating to: quality in design; construction quality and product innovation, quality and innovation in the construction process; safety management, safety on construction sites, management and maintenance of built assets and real estate, technical assessment, risk assessment and risk management.

GALINA RASHETOVNA ISKHOJANOVA

Kazakhstan

G. Iskhojanova is Dean of Faculty of Architecture IEC (KazGASA), Academic Professor, Candidate of Architecture. She graduated from the MARCHI (Moscow Institute of Architecture, Department of “Architecture of residential and public buildings”). She is the Member of the Union of Architects of the Republic of Kazakhstan, Honorary Architect of the Republic of Kazakhstan. She was a Chairman of the methodological council of the Faculty of Architecture and was the member of the Dissertation Council for candidate dissertations. She worked as a scientific consultant for the series of books on the history of culture and archeology, and as founder and editor of the first Kazakhstani magazines on architecture and design - “HALL” and «DESIGN & ADVERTISING» (1997-2003). From 2004 to 2010 she worked in various architectural and construction companies of Kazakhstan as a lead architect and a chief architect. More than 60 scientific articles and reports in the collections of national and international conferences and architectural magazines are published during the years of teaching and research working. G. Iskhojanova actively participates in international creative competitions together with students and masters of the architectural school.

NATALYA TSEITLINA

Kazakhstan

Architect , 37 Years’ experience and Practice. General Direktor in LLP „Krug“. Almaty. Kazakhstan.
From 2010 Invited Assistant of Professor in KazGASA. Leader of Students Groups from different international competitions since 2011 year and takes prizes and certificates. Leader of Students Group, who takes the first prize in the final stage of ISOVER International Students Contest for proposing a vision for “Residential function in cold climate: Astana, Kazakhstan” designed in accordance with Saint-Gobain Multy -Comfort Concept, student Contest-Edition 2015, 11-th International Edition.
Author and sub author in Projects of Houses, Sanatoriums and Hotels in Kazakhstan, Uzbekistan, Kyrgyzstan, Tajikistan and Israel.

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.

RAKHIMA USMANOVNA CHEKAYEVA

Kazakhstan

Candidate of Architecture, Professor of the Department of Architecture, Architecture and Construction Faculty, Eurasian National University. L.N. Gumilev. Author of more than 180 publications, including manuals and guidelines, articles, recommendations, introductions, monographs, books.
The main types of scientific activity: the scientific and methodological foundations of the organization and training of specialists in the field of architecture, restoration and reconstruction of the architectural heritage; Problems of studying, preserving and protecting monuments, restoration, reconstruction and popularization of architectural heritage.
Planned studies: History of Kazakhstan architecture, world architecture, modern architecture of Kazakhstan.
Awards:
1. Honored Worker of Education of the Republic of Kazakhstan “for special merits in the field of education of the Republic of Kazakhstan;
2. “The best teacher of the university - 2007” (Grant of the Ministry of Education and Science of the Republic of Kazakhstan)
3. Diploma of the 1st degree of the International Review Contest for the best project of the year in the section “Publications” and a series of teaching aids for students of architectural universities (Moscow).
4. The Honored Worker of Culture of RK - MEDENITH KAIRATKERI
5. Honored Architect of Kazakhstan
6. Medal to the “15th Anniversary of ENU”
7.Medal T. Basenova for special merits in the field of architectural education

NIYAZ MUSAKEEV

Kyrgyzstan

An Architect, was born in 1986, in 2010 he graduated from KGUCTA, in major of architect city planner. Member of the Union of Architects of Kyrgyzstan. Senior teacher of “Architecture department” in the Kyrgyz State University of Construction, Transport and Architecture. In recent years, he has been working on the development of the ethnoarchitecture of Kyrgyzstan. He is an active participant in international and national competitions. Laureate of the architectural prize Usta, has silver diploma of the international architectural rating “Golden Capital”.

YULIA VLADIMIROVNA RUDENKO

Kyrgyzstan

Rudenko Yulia Vladimirovna Senior lecturer of the department “Design of the architectural environment” KRSU. The senior architect of “Ack Studio”, a member of the Union of Architects of the Kyrgyz Republic. Post-graduate student
Author of more than 140 architectural design projects implemented and -In co-authorship of international exhibitions and competitions head of diploma projects
- memota MAOoCAo «For creative and educational mastery» 2014 years Baku;
- In co-authorship, the winner of an open architectural competition for the construction of a quarry in the 1 district of Bishkek citybin 2017. Pedagogical experience 9 years.
Professional experience 16 years.

YURI NIKOLAEVICH SMIRNOV

Kyrgyzstan

Doctor (dr.dr.) of Architecture, Associate Professor, Head of the Chair “Basics of Architectural Design”, Professor of the Chair at the Faculty of Architecture, Design and Construction (FAD&C) of the Kyrgyz-Russian Slavic University (KRSU); Certificate of Honor of the Ministry of Higher Education of the Kyrgyz Republic (2015) Eco Architecture & Eco Design — Problems & Publications.

EDGARS BONDARS

Latvia

Architect, born in 1983 in Riga, Latvia. Professional degree of Architect (2008), Master of Architecture (2009), Doctor of Architecture (2013). Doctoral thesis title: “Design of Spatial Environment in the Context of Bioclimatic Factors”. Docent at the Faculty of Architecture and Urban Planning of Riga Technical University, research fields: bioclimatic design, energy efficiency strategies in architectural design. Co-founder and member of the board of architectural company RR.ES Ltd. (since 2006), dealing with residential, public and industrial building design. Associate member (since 2014) of the Latvian Sustainable Building Council (LSBC).

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.

RADU PANA — Romania

Architect, received his Master degree in 1994 and PhD in 2007 from "Ion Mincu" University of Architecture and Urbanism, Bucharest. Teaching since graduation, interest in Building Physics and Architecture Technology, as a mean to improve buildings' comfort, energy efficiency and environmental impact. Head of the Technical Sciences Department between 2008-2016. Involved in many research projects in architectural acoustics, lighting and energy saving design, author of norms and regulations in the acoustic field.

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.

ZINAIDA POPOVA

Russia

Zinaida Popova graduated from the Ust-Kamenogorsk High road and Civil Engineering institute in 1979 with an “Architecture” specialty. She worked as an architect in Mariupol` Engineering institute. After that she began to teach at the “Architecture and Design” Sub-department in the East Kazakhstan State Technical University. In 2007, she got the Candidate of Architecture degree in the Novosibirsk State Architectural and Art Academy. Her dissertation was connected with Orthodox architecture in the north-east of Kazakhstan. Z.Popova prepared courses of follow discipliners, such as History of the arts, Technique of plastic art, Method of architectural engineering for bachelors and masters students. She published about 50 scientific papers in various collections. Moreover, Zinaida Popova was engaged in the design of recreational areas in Ust-Kamenogorsk-city. Since September 2016, she teaches at the Architectural Engineering Sub-department in the Tomsk State University of Architecture and Building. She conducts practice lessons on “Architectural engineering” and gives lectures on “Actual problems of the theory of architecture and urban planning” for bachelors and masters. Also she is the Head of the master’s thesis. Sphere of her scientific interests is the urban environment and the means of its humanization.

PHD. ARCH., PROFESSOR OLEG STAKHEEV

Russia

Area of scientific interests: architecture and town planning. Author of grants and methodical instructions. Author over 70 scientific publications in russian and international editions. The participant of the national and international conferences, symposiums, congresses and exhibitions.
Participant of many architectural competitions.
The head of scientific programs in the field of architecture and town planning.
Gives lectures and practical training according to the Architecture program at university.
Member of council of town planning of Tomsk. Honorable Architect of the Russian Federation.

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, Oikodomos), and he is author of a number of publications and co-author of the books “Effective Housing” and “Handbook of Sustainable Architecture”.

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 enterpreneur 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 interdisciplinar partner-team of experts from Brno to Kosice in 1991. GNÚSES - 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 Innitiative INTERREG 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.

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.

PROFESSOR ENRIQUE CORBAT DÍAZ

Spain

Architect from Barcelona School of Architecture ETSAB (UPC) since 1983 Speciality in bioclimatic architecture. Scholarship holder of Training Plan of Research Staff from Spanish Science and Education Ministry (1986-1989).
Since 1989 professor in building construction department in Vallés School of Architecture ETSAV (UPC).
Teaching centred in bioclimatic architecture and sustainable buildings.
Investigations in Thermal Rehabilitation of Buildings. Since 1997 continuously teaches an elective course on Bioclimatic Architecture. In 1980 he won first prize in a competition for ideas for an exhibition center of alternative energy in the International Fair of Barcelona. He has designed and built several bioclimatic buildings along his career. Finalist at the FAD prizes of Architecture in 2001 by a bioclimatic natural cooled building housing located in old town district of Barcelona. Speaker at various courses and conferences in the Association of Architects, conferences always related to solar architecture issues and sustainability. Speaker at the Catalan Congress of Renewable and solar energy 1987 and Scientific meetings of the Mediterranean environment and building energy, 1990. Professor in Graduate Program Installations in buildings. Polytechnic Foundation of Catalonia. 2002-2008. Professor in sustainability, technology in architecture and integration of renewable energies UPC's masters. Faculty advisor of eco team in Solar Decathlon Europe competition Madrid 2012. Technical committee member of Low3 and Ressò teams in Solar Decathlon Europe competition Madrid 2010 and Versailles 2014. Professor of teams finalists in Multi-confort house students competition in Bratislava 2012 and Belgrade 2013. Professor of two winner teams of Spanish competition Multi-confort house competitors in Bucharest 2014 and Astana 2015.

EUSEBIO ALONSO GARCÍA

Spain

Architect ETSA Valladolid. Professor of design and projects, 1992. Scholarship MEC (1988-1992). Prize Academy of Spain, Rome (1990-91). Doctor architect ETSAV (2001, outstanding cum laude). Finalist IV award Arquithesis (2003). Award doctorate extraordinary, ETSA, Universidad de Valladolid, 2002-2003. Professor Master of research in architecture, ETSAV. Member of the Research Group Recognised Architecture and Cinema GIRAC. Publications: Transparency and opacity in the houses of Marcel Breuer (2002); San Carlino: the geometric machine of Borromini (2003, Prologue : Paolo Portoghesi); Mario Ridolfi, architecture, contingency and process (2007, 2014); Alvaro Siza (BAU 1996), Fisac (2008), Paulo Mendes da Rocha (DPA UPC 2014); Alojamiento para otros modos de vida (2015). Conferences: Plan Obús de Le Corbusier versus Metropolis de Fritz Lang (AVANCA, Cinema 2016); Actions to recover the absent city. Simultaneity and Hipersocialization. (Housing – A Critical Perspective, Liverpool, UK, 8-9 April 2015); From Ronchamp to Venice hospital. Myth religious and memory collective in the last LC (symbolic spaces of the modernity, Covarrubias, 2014); Hallucinatory Strategies in the last LC (Critic All, Madrid, 2014); Firminy Church and the machine à émouvoir of LC (CEAA, Porto, 2012). Works and projects: recognition and awards in competitive contests, collected in publications and exhibitions: first prize Benta-Berri, 1993; Fourth prize Europan III, 1993; First prize and second prize of architecture in Castilla y León (CyL) 98-99; Mention V Prize Julio Galán Carvajal, 2001; Selected VI HISPALYT brick architectural award, 2002; Third prize Sports Center in Santander, 2002; Honorable mention of sustainable construction CyL, 2007; First prize and finalist in architecture in CyL 2008-10; Architecture in Zamora XXI century, 2011; Third Prize: Center of companies in Torrelavega, 2013.

MANUEL MONTESDEOCA CALDERÍN

Spain

Architect by the Architecture School of Las Palmas de Gran Canaria University (EAULPGC) since 1986, specialized in Building and Urbanism. Intern of the Training Plan for Research Personnel of the Ministry of Education and Science (1987-1989). Associate Professor of the Department of Architectural Construction from 1990 to 2006. Assistant Professor in the Department of Architectural Construction since 2006, teaching in subjects related to Environmental Conditioning of buildings, Bioclimatic architecture, Sustainable architecture, control of energy demand and Energy efficiency of buildings, zero energy buildings (nZEB) and architectural acoustics. Doctor Architect by the University of Las Palmas de Gran Canaria, since January 2016. Has developed investigation work in relation to the above mentioned subjects and has participated in a multidisciplinary team, responsable of elaborating a guide on the "Study of the envelope of the building using Canary materials", in a specific agreement of collaboration with the Public Works and transportation counseling of the autonomous community administration. Coordinating professor of the "ISOVER MULTI**COMFORT** House International Competition", from the Architecture School of Las Palmas de Gran Canaria University (ULPGC). In 2010 he joined the research group LIP (a) (Research Laboratory of Architectural Projects). In 2011 he assumed the position of vice principal of Quality Assurance at the Architecture School of Las Palmas de Gran Canaria. In 2015, he becomes a member of the research team of the proyect BIA2015-64321-R, "Energetic impact of air permeability of residential buildings in Spain: Study and characterization of their infiltrations (INFILES)", as part of the State Program Of Research, Development and Innovation Oriented to the Challenges of the Society, Call 2015, Modality 1: "R + D + I Projects". Its main investigator is D. Jesús Feijo Muñóz, university professor, Department of Architectural Constructions, Engineering of the Land and Mechanics of the Continuous Means and Structure Theory of the University of Valladolid. In 2016 he joined the Architecture and Landscape Research Group of the ULPGC.

PROF. DR. ABDURRAHMAN KILIÇ

Turkey

Starting his initial studies about fire at İstanbul Technical University in 1987, Prof. Dr. Abdurrahman Kılıç 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, Kılıç 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 Kılıç 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.

ARCH. DURMUŞ DILEKÇI

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.

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.

PHD. ARCH. NELLYA LESHCHENKO

Ukraine

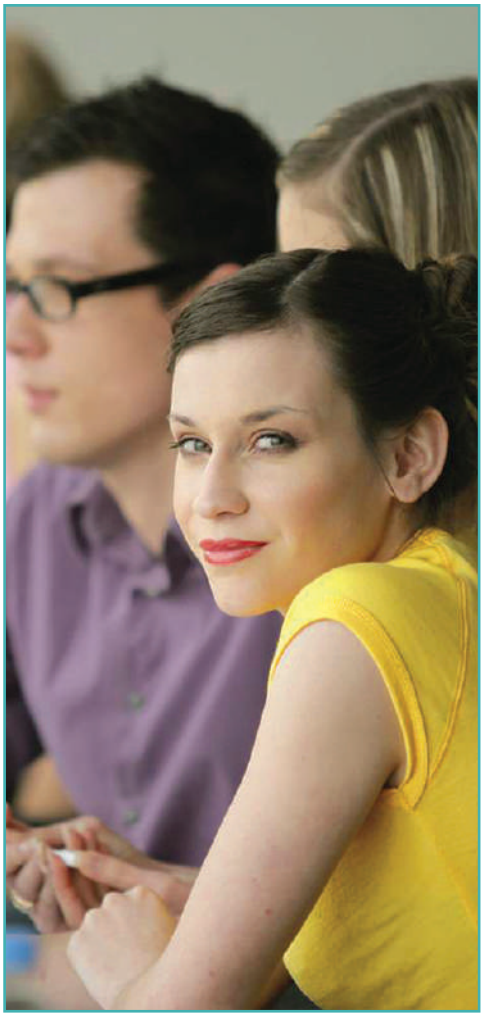
Architect. Graduated from the Faculty of Architecture, Kiev Civil Engineering Institute. In 2000 obtained degree of PhD in Architecture at Kiev National University of Construction and Architecture (KNUCA). Since 2000 - the chief architect of design and construction firm. Author of more than 100 architectural projects. Since 2010 – associate professor, Department of Information Technology in Architecture (KNUCA). Curator of students diploma projects, awarded at national and international competitions. Tutor of masters and postgraduate students. Research fields: revalorization of historical centers of small towns, renovation of urban space.

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.

2018 Edition



Invitation for Competition Submissions MULTI**COMFORT** HOUSE STUDENTS CONTEST 2018

Community development in Dubai

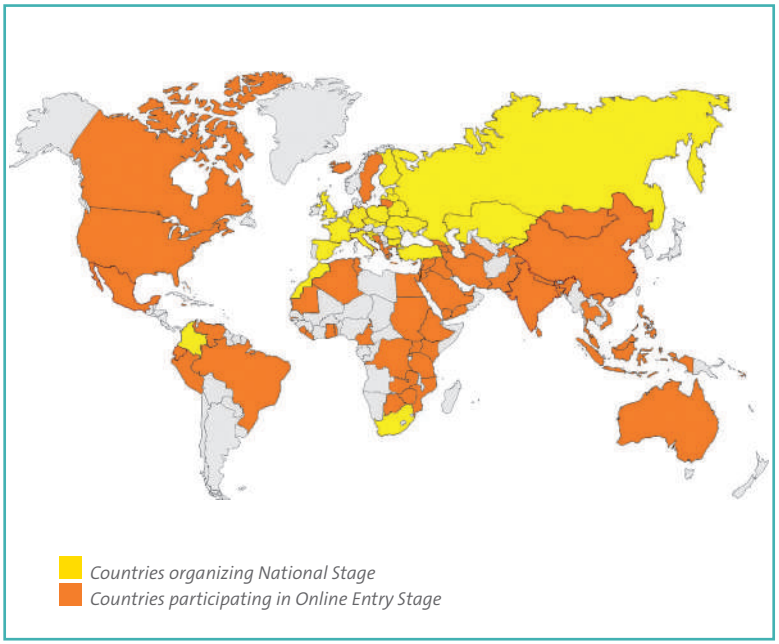
International, two-stage, open competition, 2018 edition

Content:	Community development located in the perimeter of cultural village of Dubai
Participants:	Students
Organizer:	Saint-Gobain Group
Official Website:	www.isover-students.com

The task for 14th International Edition of MULTI**COMFORT** House Students Contest developed by Saint-Gobain in close collaboration with Municipality of Dubai requires the participant to develop a vision for a transcultural vibrant community development located in the perimeter of cultural village of Dubai. The design will have to propose a viable combination of residential and public spaces such as cultural, commercial, others.

Residential
The territory is conceptually proposed to be developed by taking advantage of the water front without interfering with the view of the closely by situated MFH buildings. Special attention will be given to maximizing the comfort of the inhabitants for all four comfort dimensions (thermal, acoustic, air quality, visual) by taking in to account the local climate data and the specificities of the place.

Public places
This is entirely up to the decision of the authors to propose according to their vision. This public space should contribute to make this area a vibrant areal also during the harshest summer time when the temperature exceed 45 degrees in the shadow.



*Participating countries to final stage of MULTI**COMFORT** HOUSE STUDENTS CONTEST, EDITION 2017*

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

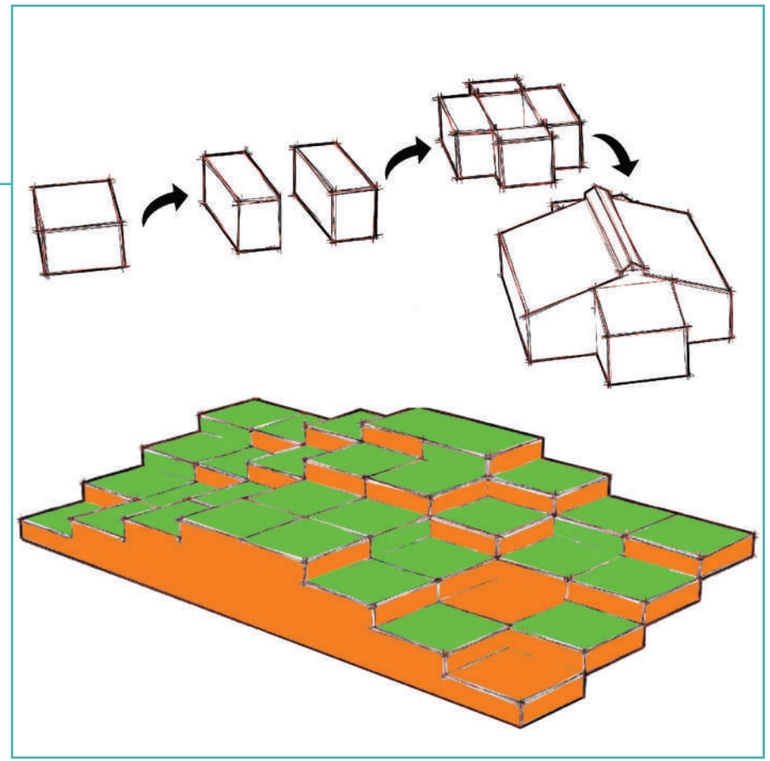
I PRIZE
INDIA
Online Stage 2017

LOKESH
RAGHUL.J

Anna University

Urban Regeneration of a community in Madrid

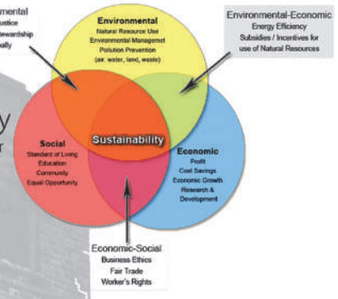
Madrid, Spain



I PRIZE

MULTI**COMFORT** House
Students Contest
Online stage 2017

CONCEPT

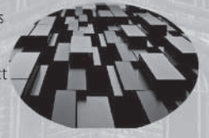


The concept is sustainabilty
which is based on factor

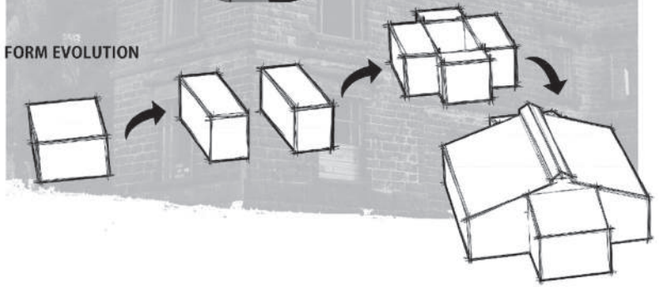
The given site is surrounded by buildings and its mostly used my elderly people thus green space is provided

The level of site (that's step or pathway) is provided according to comfort level,thus they access easily and comfortably

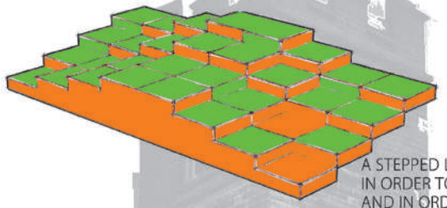
The building form is cuboid which lock the people.
the people's contact and relationship will be good level.



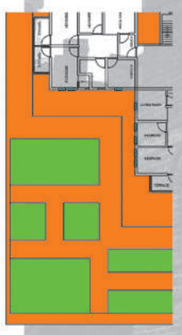
FORM EVOLUTION

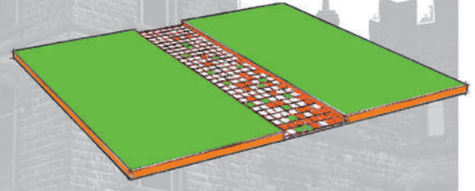


DETAILS



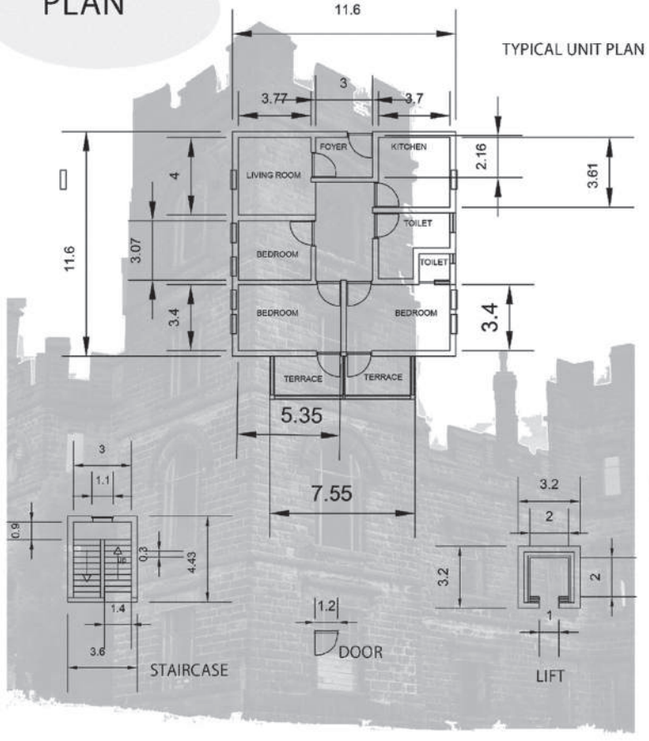
A STEPPED LEVEL GREEN VEGETATION IN ORDER TO AESTHETICALLY LOOK AND IN ORDER TO PROVIDE A CLIMATICAL ZONE



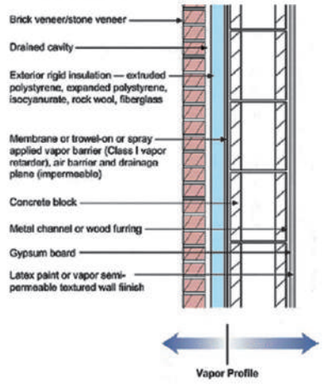


THE LANDSCAPE IS PROVIEDED WITH THE TERRACOTTA AND GRASS WHICH PSYCHOLOGICAL GIVES A BREEZE EFFECT IN THE MORNING AND EVENING. THUS WHILE WALKING IN IT,FEELS GOOD ENIVORNMENT.

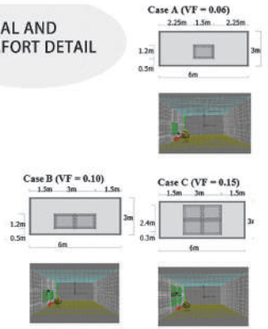
PLAN



WALL DETAILS



VISUAL AND COMFORT DETAIL



Urban Regeneration of a community in Madrid

Madrid, Spain

I PRIZE
BELARUS
National Stage 2017

VERONIKA SUPRUNIUK

BNTU

02

SAINT-GOBAIN

154,2 m2

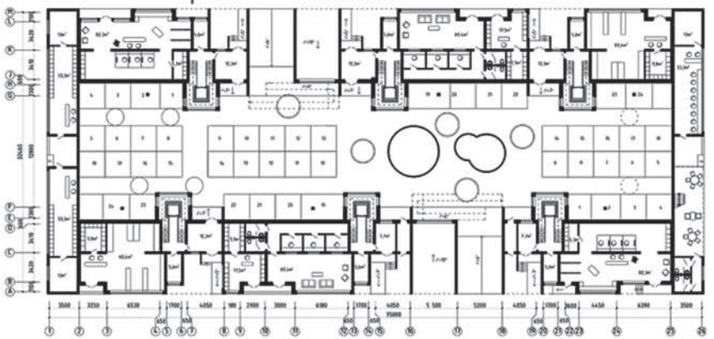
STATISTICS FOR ONE BLOCK

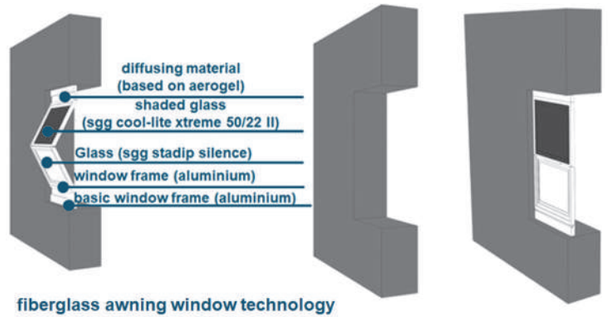
168,1 m2

+13,9 m2

mercedes car center
reconstructed building
nearest buildings
motion path
greenery
main roads
cafe
barbershop
pharmacy
bank
shop
confectionery
household chemistry
park

first floor

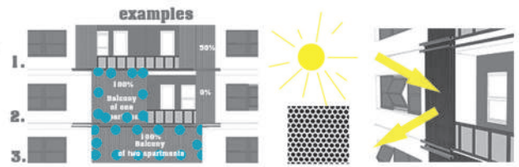




fiberglass awning window technology

1.perforated plastic provides 60 to 80% shading.
2.rails allow to close from 20 to 100% of the surface

examples



ACOUSTIC

1.Saint Gobain sgg cool-lite xtreme 50/22 II, 40dB.
1.Saint Gobain sgg stadip silence, 40dB.
2.Sound absorbing suspended ceiling acoustic TP1, 23dB.
3.Isover sound protect, 38dB.
4.Isover acoustic EP5, 25dB.
5.Exterior sound insulation, 65dB.

SECTION I-I, VENTILATION, COLLECTION OF RAINWATER AND SOLAR ENERGY

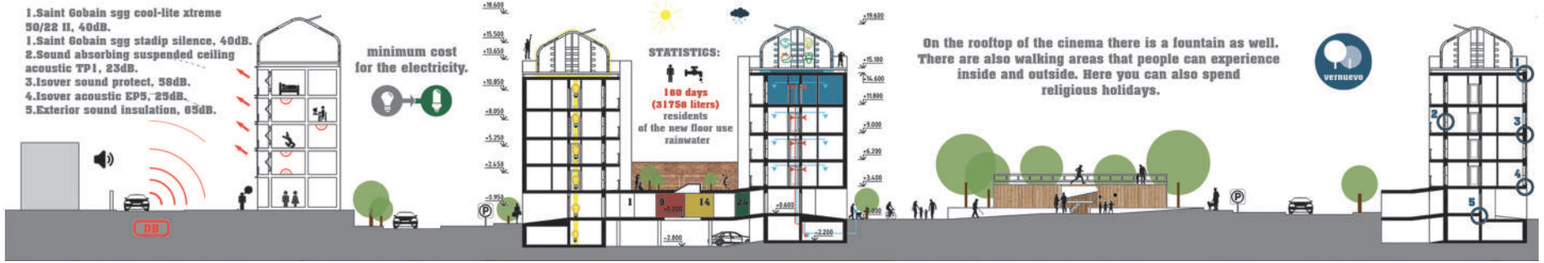
minimum cost for the electricity.

STATISTICS:

180 days (31750 liters) residents of the new floor use rainwater

PARK

On the rooftop of the cinema there is a fountain as well. There are also walking areas that people can experience inside and outside. Here you can also spend religious holidays.



more about the project on **www.isover-students.com**

Urban Regeneration of a community in Madrid

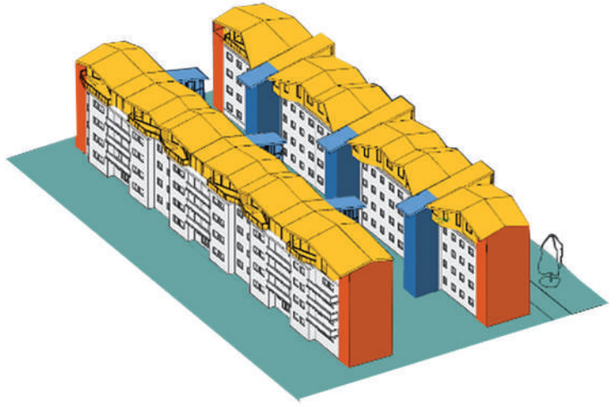
Madrid, Spain

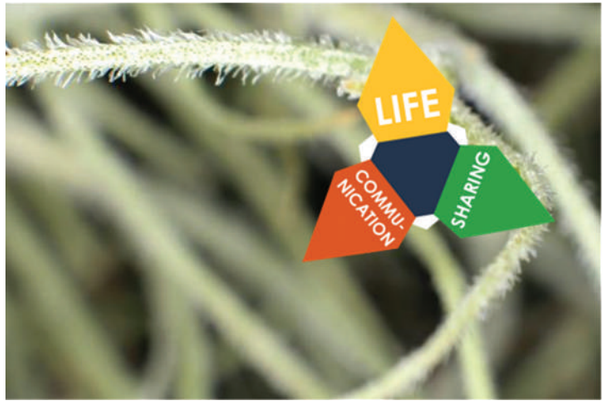
II PRIZE
BELARUS
National Stage 2017

ALINA VYSOTSKAYA

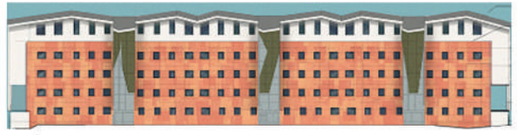
NIKITA MAKAREVICH

BNTU

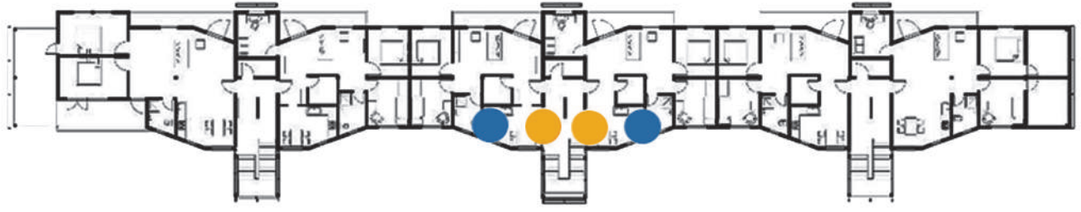




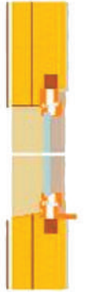
North facades



South facades

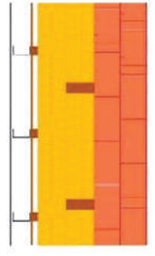


Metal sheet covering
Separating layer
2.4 Solid timber panelling
24 ISOVER Integra ZKF 1-032
ISOVER Vario KM Duplex UV
6 ISOVER Integra UKF 1-032
2.5 Rigips Rigidur H double layer



Saint-Gobain glass
triple glazing SGG COOL-LITE ST +
SGG CLIMATOP LUX

2.5 Rigips Rigidur H double layer
ISOVER Vario KM Duplex UV
4 ISOVER Akustic EP3 (horizontal wood)
12 ISOVER Integra ZKF 1-032 (vertical wood)
1.5 OSB board
10 ISOVER Kontur FSP 1-032 Easy Fix (vertical wood)
3 Rear ventilation
1 Exterior cladding (wooden panels)



1.5 interior plaster
30 Bearing brick wall
16 ISOVER Kontur FSP 1-032 Easy Fix (wood vertical)
16 ISOVER Kontur FSP 1-032 Easy Fix (wood horizontal)
3 Rear ventilation
1 Exterior cladding (wooden panels)
0.5 Perforated facade panels

Urban Regeneration of a community in Madrid

Madrid, Spain

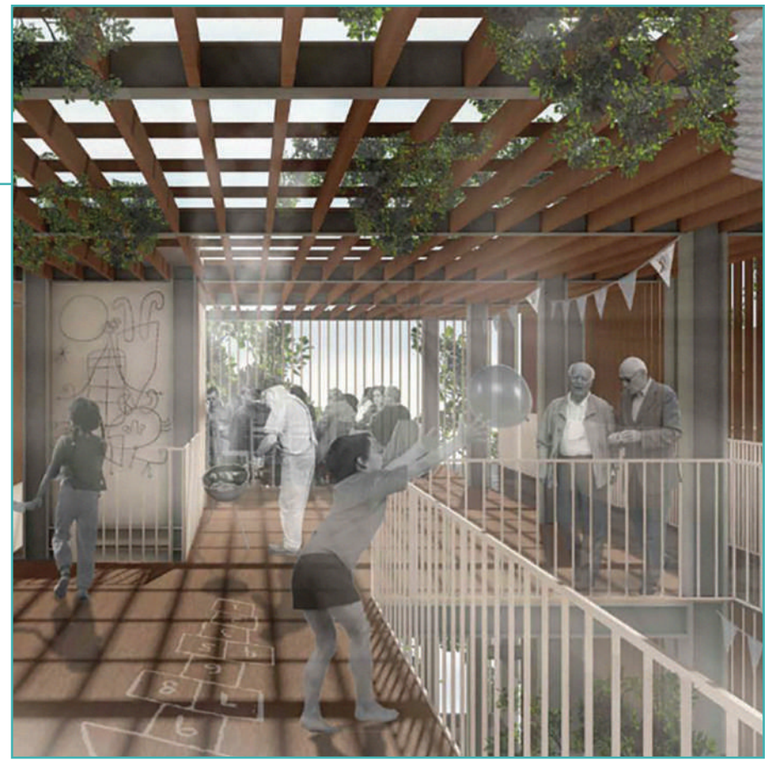
I PRIZE
BELGIUM
National Stage 2017

IANTHE LINDELAUF

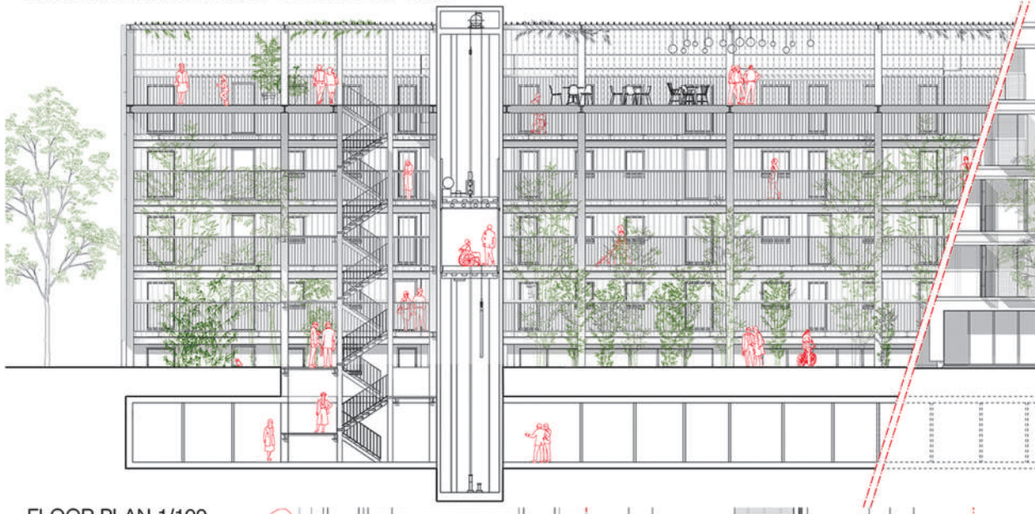
MARIE MOORS

THOMAS CALLAERTS

University of Hasselt Belgium

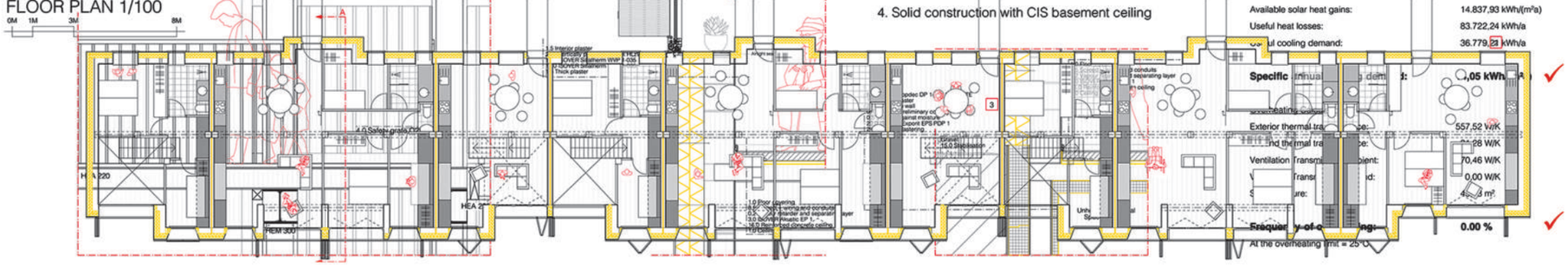


LONGITUDINAL SECTION COURTYARD 1/100

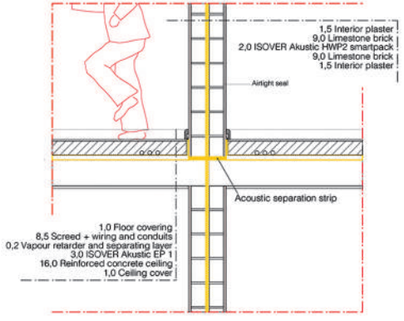


ELEVATION SOUTH 1/100

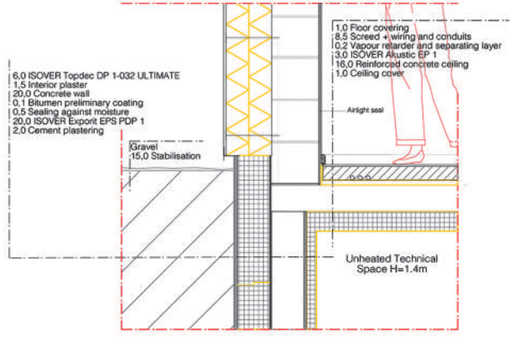
FLOOR PLAN 1/100



3. Partition wall, floor slab



4. Solid construction with CIS basement ceiling



Urban Regeneration of a community in Madrid

Madrid, Spain

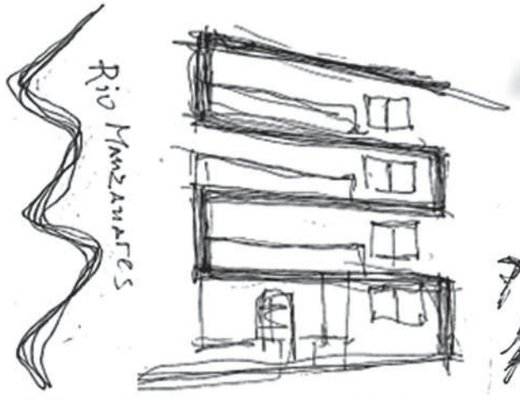
I PRIZE
BULGARIA
National Stage 2017

ANGEL PETRAKOV

POLINA SLAVOVA

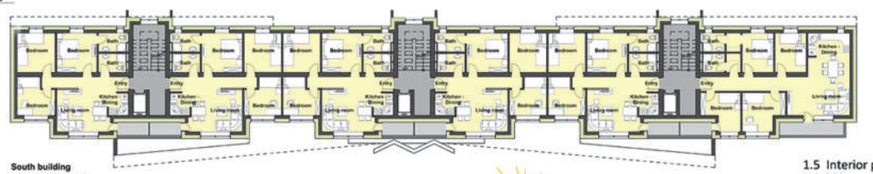
VSU “Chernorizetz Hrabyr”

Concept



Architecture

North building
Standard floor 1:100



South building
Standard floor 1:100

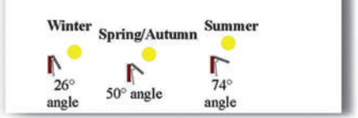
Winter

Madrid
Optimum Tilt of Solar Panels by Month

Figures shown in degrees from vertical

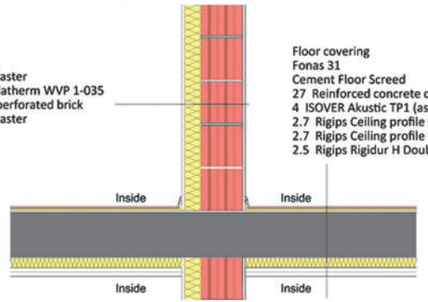
Jan	Feb	Mar	Apr	May	Jun
34°	42°	50°	58°	66°	74°

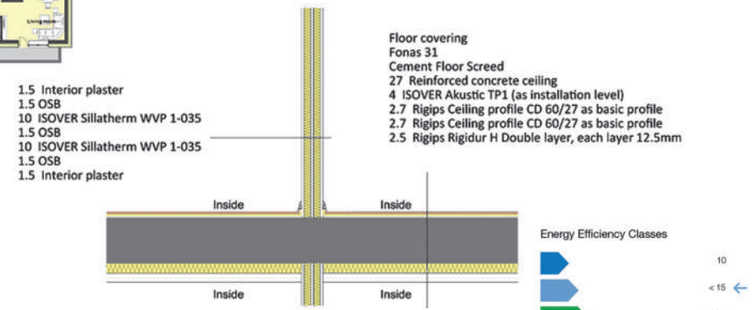
Jul	Aug	Sep	Oct	Nov	Dec
66°	58°	50°	42°	34°	26°



Summer

Details

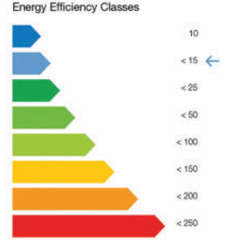




Calculations
Transmission Heat Losses: 36546.66 kWh/a
Ventilation Heat Losses: 46629.89 kWh/a
Total Heat Losses: 83176.56 kWh/a
Internal Heat Gains: 22296.96 kWh/a
Solar Heat Gains: 19905.89 kWh/a
Total Heat Gains: 41491.60 kWh/a
Annual Heat Demand: 41684.96 kWh/a

Overheating Calculations
Exterior Thermal Transmittance: 526.66
Ground Thermal Transmittance: 44.64
Ventilation Transmitton Ambient: 4095.17
Ventilation Transmission Ground: 0.00

Solar Aperture: 13.91m²



Urban Regeneration of a community in Madrid

Madrid, Spain

II PRIZE
BULGARIA
National Stage 2017

DENITSA CHAVDAROVA

HASAN HASANOV

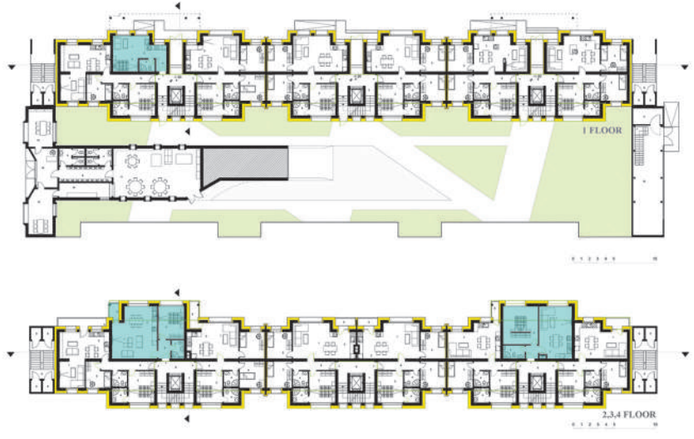
VSU "Luben Karavelov"

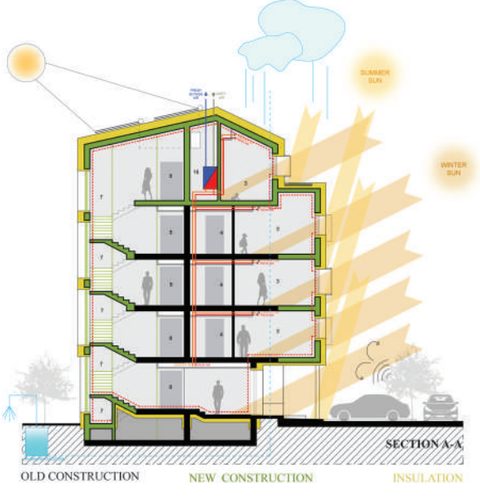
FASADE NORTH

FASADE SOUTH

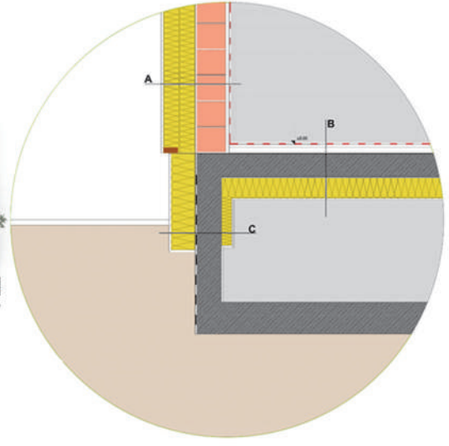
FASADE EAST

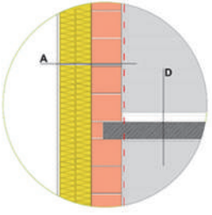
NEW APARTMENTS





DETAILS





Section A in cm

1,5	Interior plaster
25,0	Vertically perforated brick HLzW
14,0	ISOVER Sillatherm WVP 1-035
14,0	ISOVER Sillatherm WVP 1-035
1,5	Thick plaster coat

Section B in cm

	Floor covering
	Screed
	PE foil
1.5	ISOVER insulation ARENA PF (λ=0,032)
	Concrete slab (333 Kg/m2)
15	ISOVER insulation ARENA PLUS (λ=0,034)
1.3	Plaster board

Section C in cm

1.3	Plaster board
12.0	ISOVER insulation ARENA PLUS (λ=0,034)
	Concrete wall
	Vapour barrier and waterproof insulation layers
15.0	ISOVER XPS (λ=0,032)
	External rendering

Section D in cm

	Floor covering
	Screed
	PE foil
1.5	ISOVER insulation ARENA PF (λ=0,032)
	Concrete slab (333 Kg/m2)
	Interior rendering

CALCULATIONS

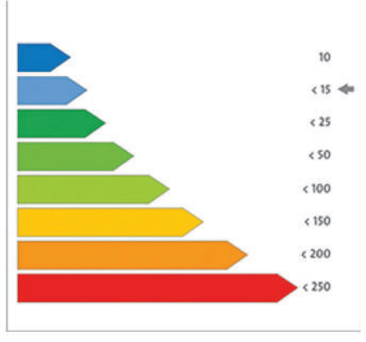
Specific Heat Demand

Transmission Heat Losses: 8345.95 kWh/a
Ventilation Heat Losses:603.25 kWh/a
Total Heat Losses: 7284.93 kWh/a
Internal Heat Gains: 1670.05 kWh/a
Solar Heat Gains: 2239.11 kWh/a
Total Heat Gains: 4945.46 kWh/a
Annual Heat Demand: 3532.61 kWh/a

Specific Heat Demand: 10.65 kWh/(m2a)

Overheating

Exterior Thermal Transmittance: 156.82 W/K
Ground Thermal Transmittance: 27.50 W/K
Ventilation Transmittion Ambient: 12.15 W/K
Ventilation Transmission Ground: 0.00 W/K
Solar Aperture:13.35 m2
Frequency of Overheating: 0 %



Urban Regeneration of a community in Madrid

Madrid, Spain

III PRIZE
BULGARIA
National Stage 2017

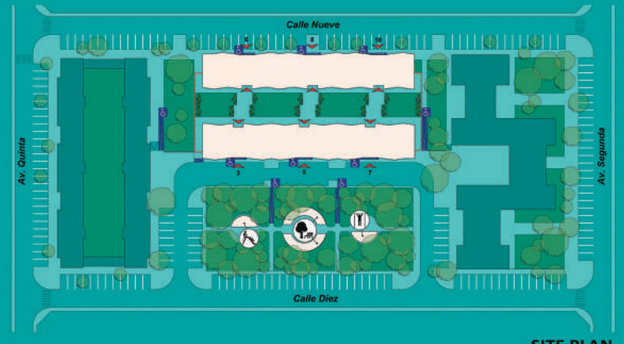
ALEKSANDRINA ALEKSANDROVA

New Bulgarian University

SUN

Sustainable Development

Nature



SITE PLAN

SHADOWS

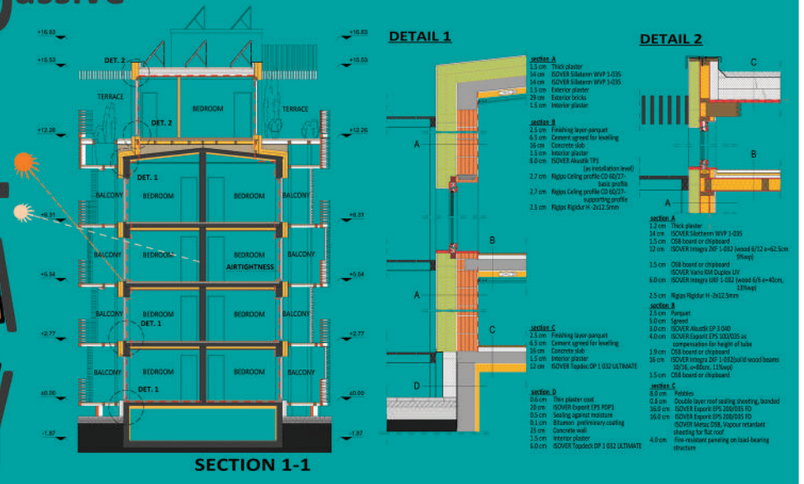
Strategy

TYPICAL FLOOR

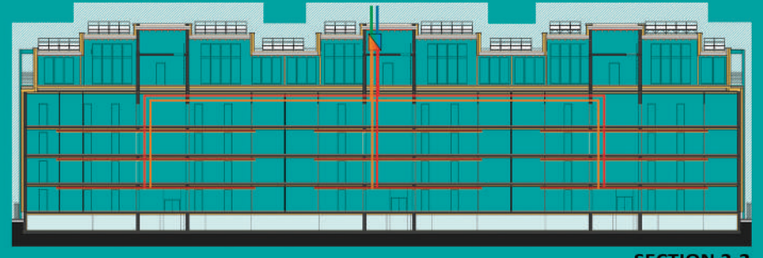
NEW FLOOR

PLAY

Passive



SECTION 1-1



SECTION 2-2

more about the project on **www.isover-students.com**

Urban Regeneration of a community in Madrid

Madrid, Spain

I PRIZE
COLUMBIA
National Stage 2017

MARIA CAMILA CANTILLO

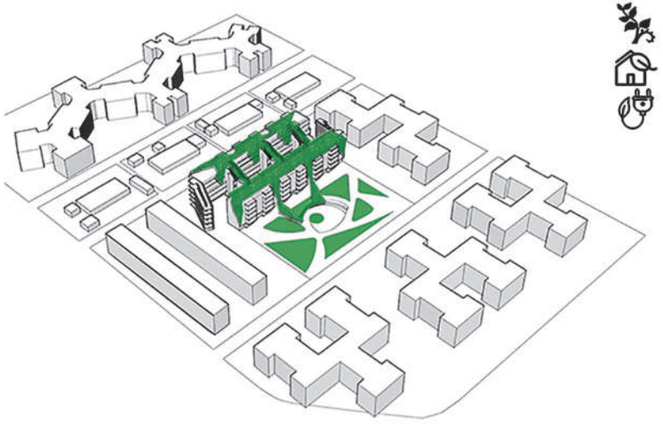
ROSALBA MORENO

Universitad del Northe

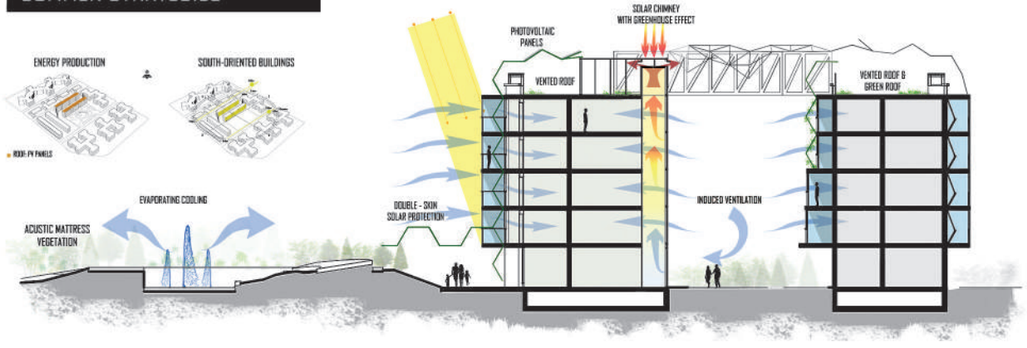
08

more information on **www.isover-students.com**

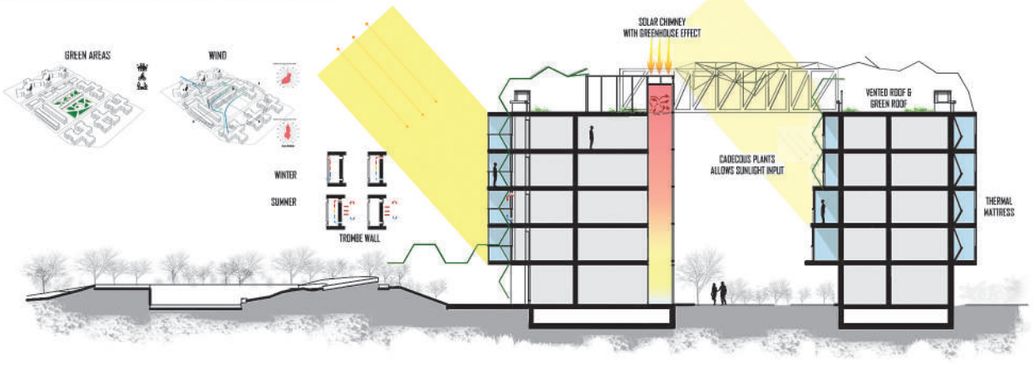
CLIMBING PLANT - ARQUITECTURE & NATURE

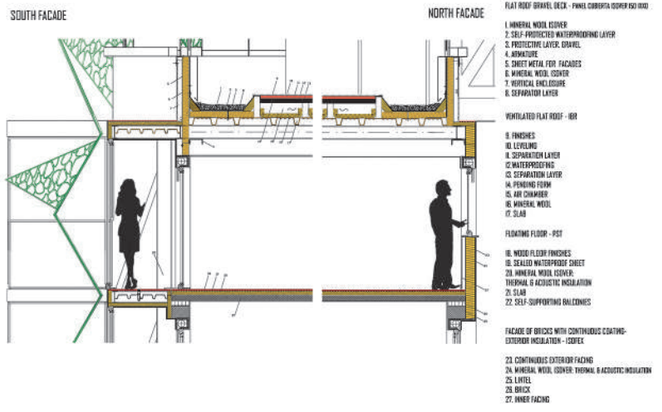


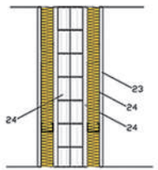
SUMMER STRATEGIES



WINTER STRATEGIES

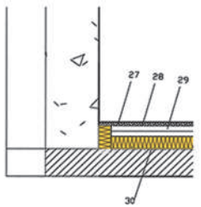






INTERIOR PARTITION MEDIANERA TRANSPOSED DOUBLE SIDED - ARENA

32. SUPERBOARD
33. MINERAL WOOL ISOVER
34. SEPARATION
35. MAIN SHEET



FLOATING FLOOR - PANEL SOLADO

28. FINISHES
29. SUPERBOARD
30. MINERAL WOOL ISOVER: THERMAL & ACOUSTIC NSULATION
31. SLAB

Urban Regeneration of a community in Madrid

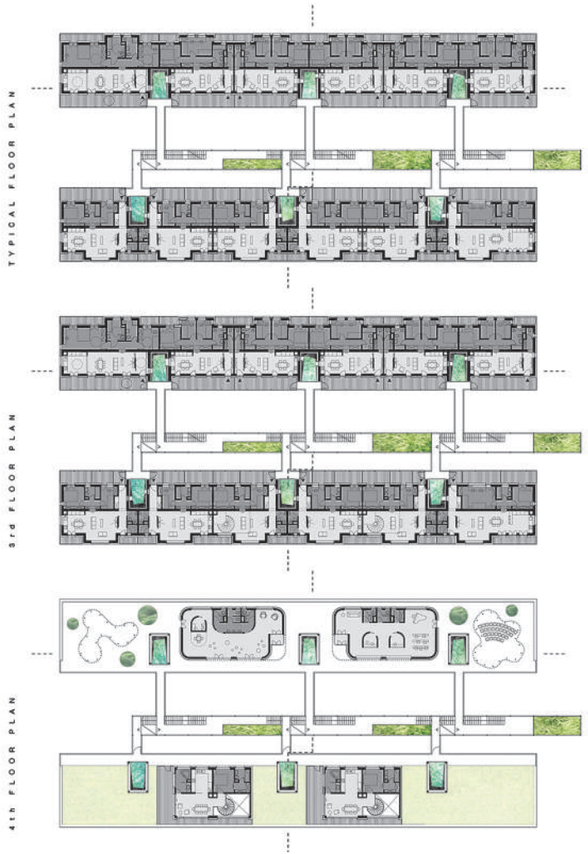
Madrid, Spain

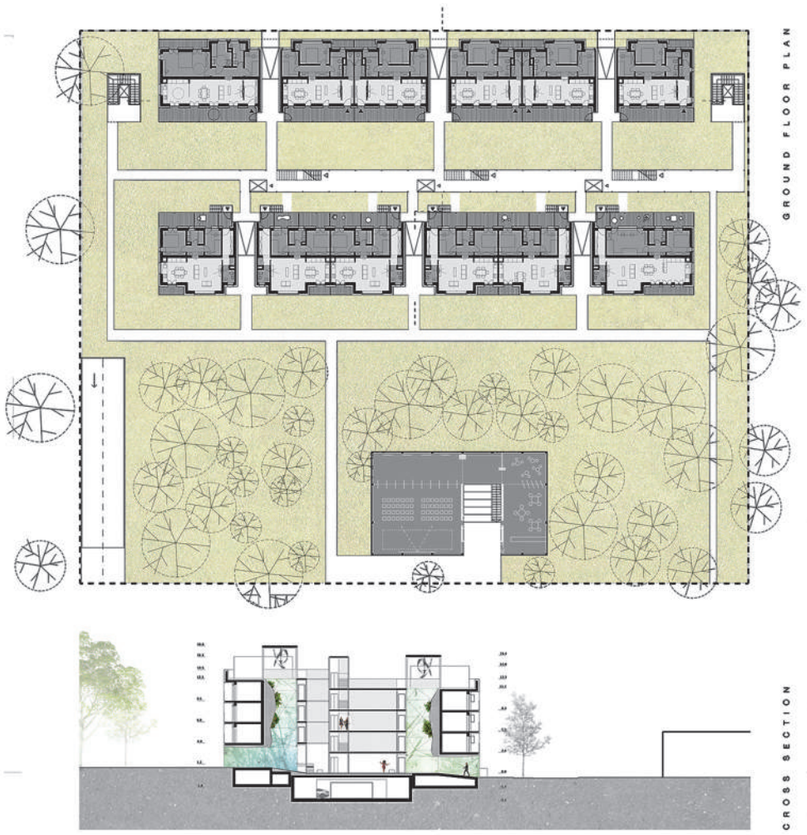
I PRIZE
CROATIA
National Stage 2017

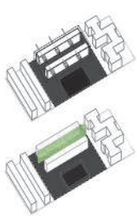
DORA RUBIN

VELIMIR BENIC

University of Zagreb

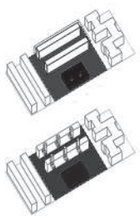






passageways lead to the open space between the buildings
:
new communication system

assembly line as a theme
:
new staircases organized in a linear structure

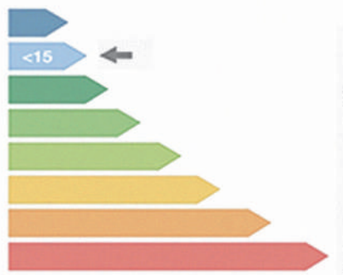


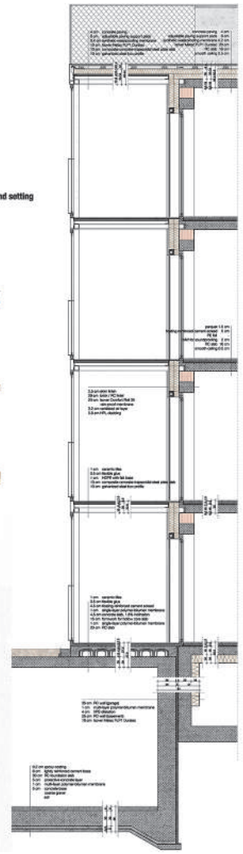
two buildings organized as a whole
+
semi-underground pavilion in the park (sound)

forming towers by eliminating the staircases
:
generators of unique identity, micro-climatic and sound setting

Specific Heat Demand

Transmission Heat Losses:	40350.91	kWh/a
Ventilation Heat Losses:	17265.55	kWh/a
Total Heat Losses:	57616.46	kWh/a
Internal Heat Gains:	20274.31	kWh/a
Solar Heat Gains:	8250.71	kWh/a
Total Heat Gains:	28090.22	kWh/a
Annual Heat Demand:	29526.25	kWh/a
Specific Heat Demand:	11.60	kWh/(m2a)





Urban Regeneration of a community in Madrid

Madrid, Spain

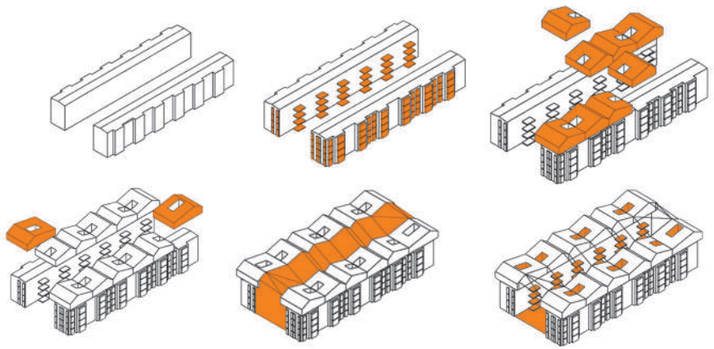
II PRIZE
CROATIA
National Stage 2017

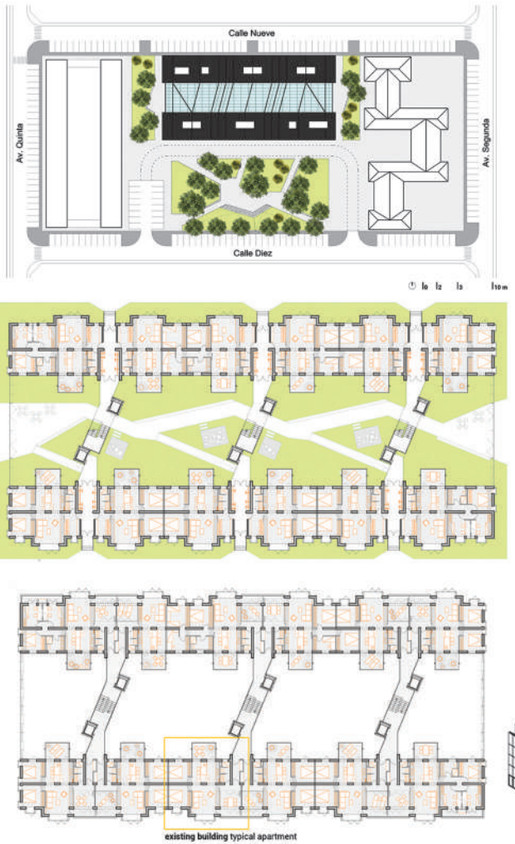
IMANOL HERNANDEZ

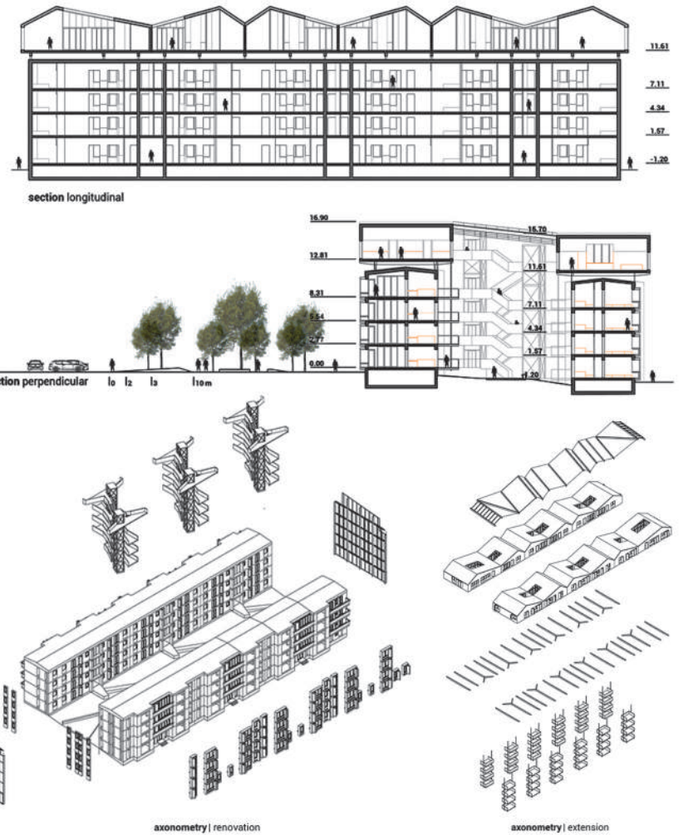
MARKO BLAGEC

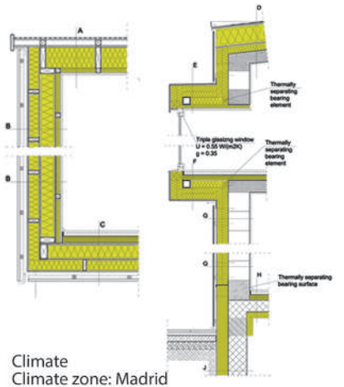
University of Zagreb

10





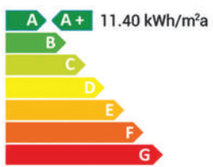




Climate
Climate zone: Madrid
Type of Construction
Construcion: Renovation
Usage
Building Type: Residential
Usage For living
Design Temperature 20°

HEATED SPACE AREA AND VOLUME
Total Heated Space Area
Heated Space Area: 1917.20 m2
Total Heated Space Volume
Heated Space Volume: 2283.60 m3

Energy efficiency classes



Urban Regeneration of a community in Madrid

Madrid, Spain

I PRIZE
CZECH REPUBLIC
National Stage 2017

TOMÁŠ
TRUXA

Czech Technical University in Prague

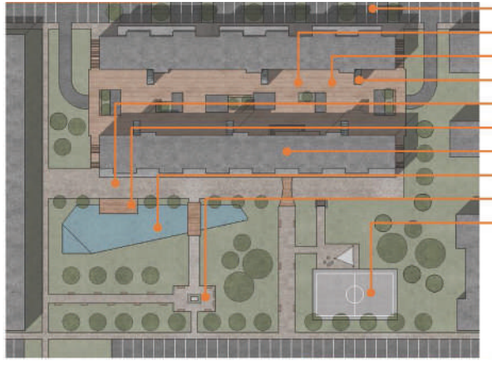
MIDSUMMER - 21ST JUNE

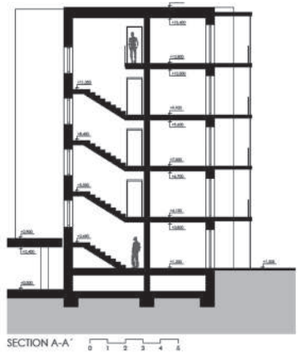
NATURAL DAYLIGHT STRATEGY

- every flat has enough sunlight
- all living rooms are situated to south
- aech apartment has windows to south with view to park
- summer overheating is minimalized by exterior sliding blinds, sliding panels and balcony

ENERGY SUPPLY AND OVERALL SUSTAINABLE CONCEPT

- primary source of energy is heat pump
- secondary power source are solar collectors
- building is conected to source of electricity and water
- solar gains are used to reduce energy demand
- controlled ventilation with heat recovery units decrease heat loss
- budling has green roof
- rainwater is accumulated in pond in park and used for irrigation and watering
- underground waste containers are situated near the building

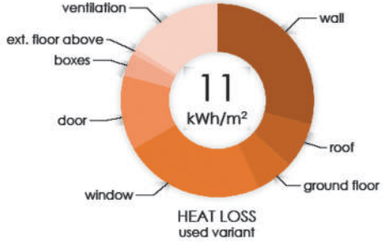




SECTION A-A'

FLOOR PLAN 2ND

FLOOR PLAN 5TH



HEAT LOSS
used variant

STRATEGY TO ACHIEVE THERMAL COMFORT

- ratio A/V = 0,47
- heat transfer coefficient:
  - U_{wall} = 0,15 W/m²K
  - U_{roof} = 0,15 W/m²K
  - U_{window} = 0,80 W/m²K
  - U_{EM} = 0,28 W/m²K
- maximal elemination of thermal bridges
- maximal airtight $n^{50} = 0,6\ h^{-1}$
- controlled ventilation with heat recovery units
- heat recovery units with efficiency over 85 %
- obtain solar energy in winter
- reduce heat gains in summer
- use sliding blinds and balconies for sun protection

STRATEGY TO ACHIEVE INDOOR AIR QUALITY

- controlled ventilation with heat recovery units
- recovery units reduce heat loss
- cascade aeration principle
- fresh air is supplied to living rooms and bedrooms
- wasted air is discharged from kitchens, bathrooms and toilets
- entired aeration system is automated
- it is possible to ventilate naturally every room

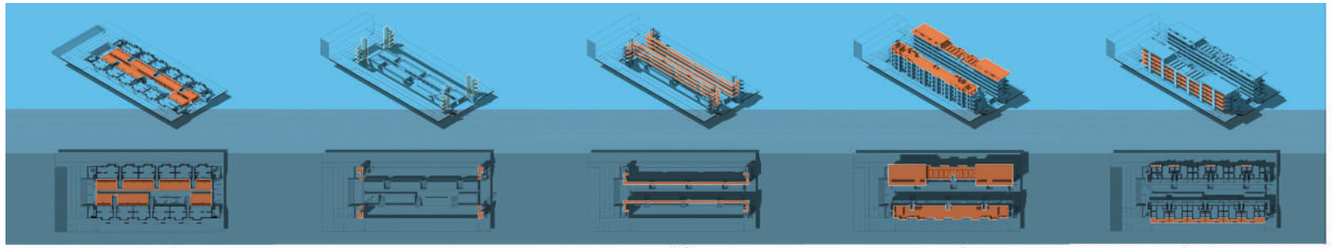
Urban Regeneration of a community in Madrid

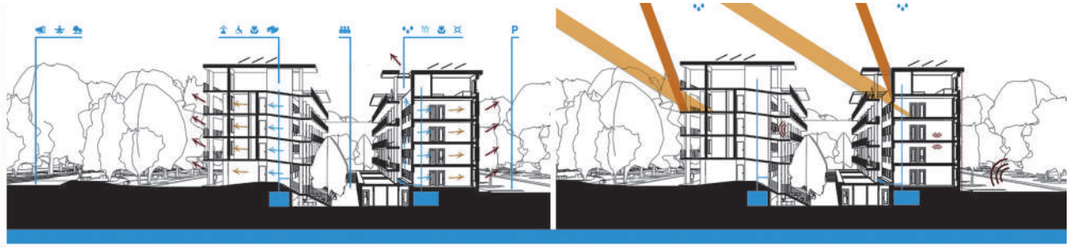
Madrid, Spain

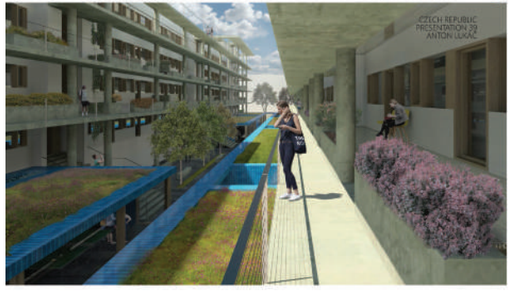
II PRIZE
CZECH REPUBLIC
National Stage 2017

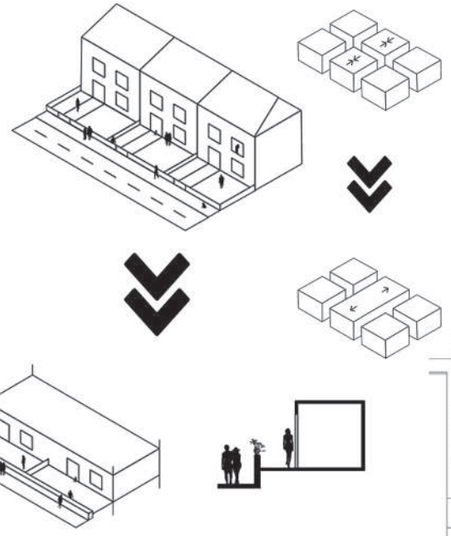
ANTON LUKÁČ

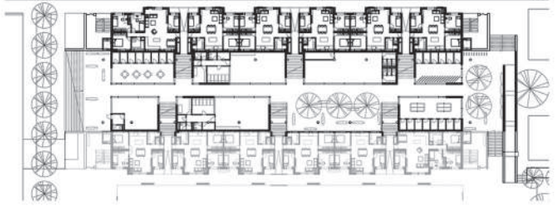
CTU in Prague









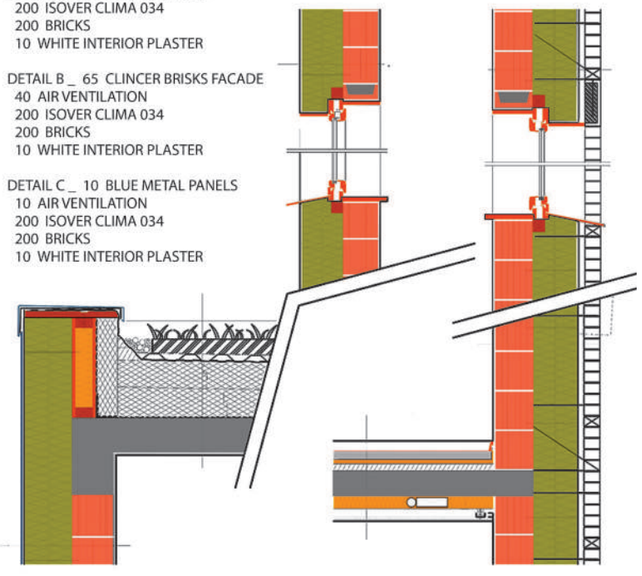


DETAIL D _ 100 SUBSTRATE _
EXTENSIVE GREENARY
40 SEPARATION FILM
10 WATERPROOFING
300 ISOVER EPS 200S
5 VAPOUR BARRIER
200 REINFORCED CONCRETE
10 WHITE INTERIOR PLASTER

DETAIL A _ 10 WHITE PLASTER
200 ISOVER CLIMA 034
200 BRICKS
10 WHITE INTERIOR PLASTER

DETAIL B _ 65 CLINCER BRISKS FACADE
40 AIR VENTILATION
200 ISOVER CLIMA 034
200 BRICKS
10 WHITE INTERIOR PLASTER

DETAIL C _ 10 BLUE METAL PANELS
10 AIR VENTILATION
200 ISOVER CLIMA 034
200 BRICKS
10 WHITE INTERIOR PLASTER



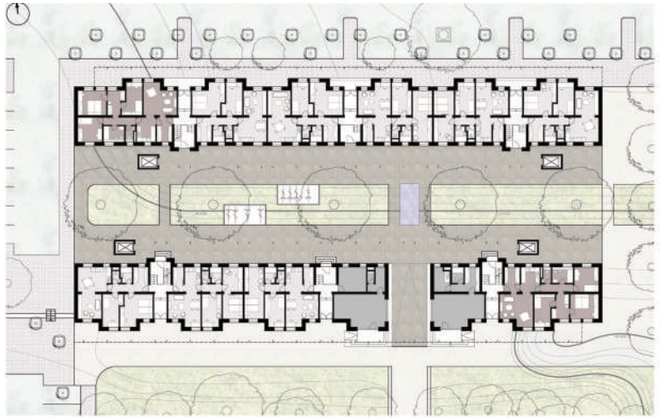
Urban Regeneration of a community in Madrid

Madrid, Spain

III PRIZE
CZECH REPUBLIC
National Stage 2017

IVETA HURAJČÍKOVÁ

Czech Technical University in Prague



TYPICAL FLOOR, M1:250

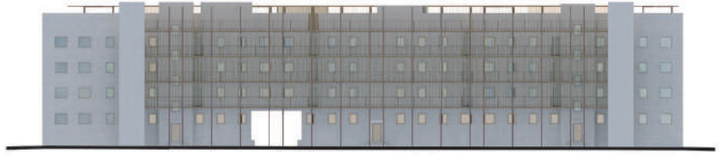
There are 12 apartments (6 + 6) on the floor. The apartments are accessible either from the staircase or from the couryard gallery. Each apartment is also expa by a balcony, one or two, according to the choice of the owner of the apartment.

ROOF, M1:250

The roof is fully accessible to all residents of the house. There are not only outdoor gardens for relaxation and recreation, but also spaces for family celebratio room for mutual babysitting or a common drying room. Residents of the house can also use the possibility of renting a box for growing vegetables.

SOUTH FACADE (FROM THE PARK), M1:250

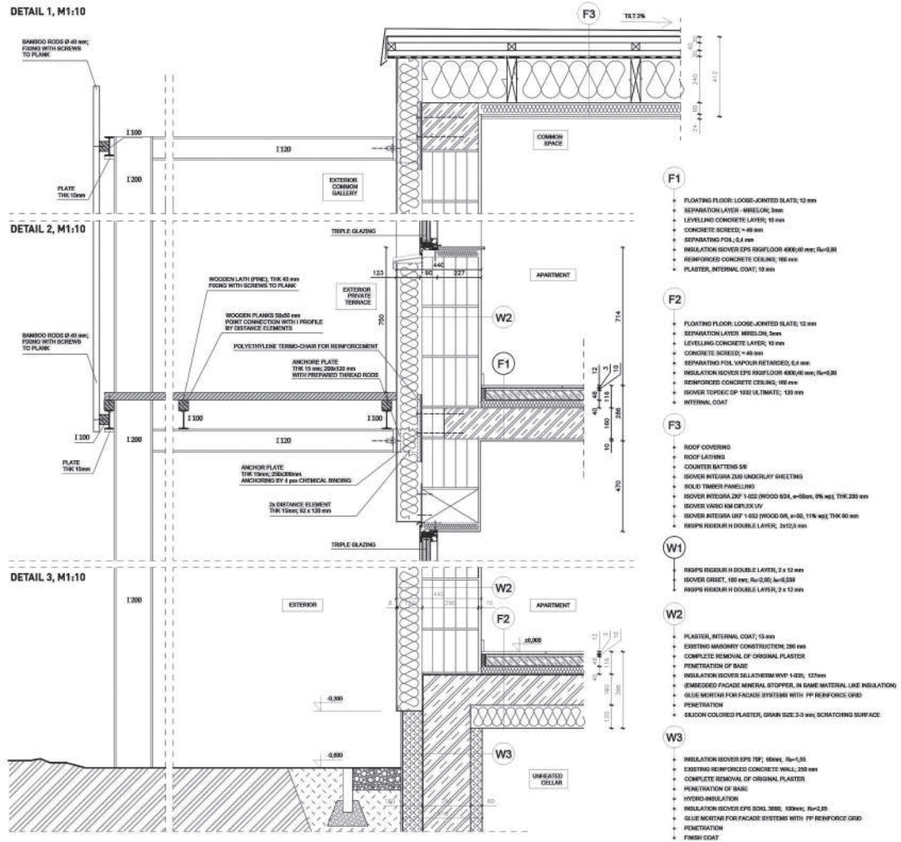
NORTH FACADE (COURTYARD), M1:250



DETAIL 1, M1:10

DETAIL 2, M1:10

DETAIL 3, M1:10



Urban Regeneration of a community in Madrid

Madrid, Spain

I PRIZE
ESTONIA
National Stage 2017

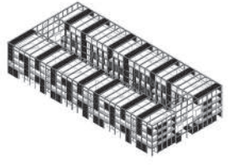
ALLAR ESKO

MARIANN KRUUSE

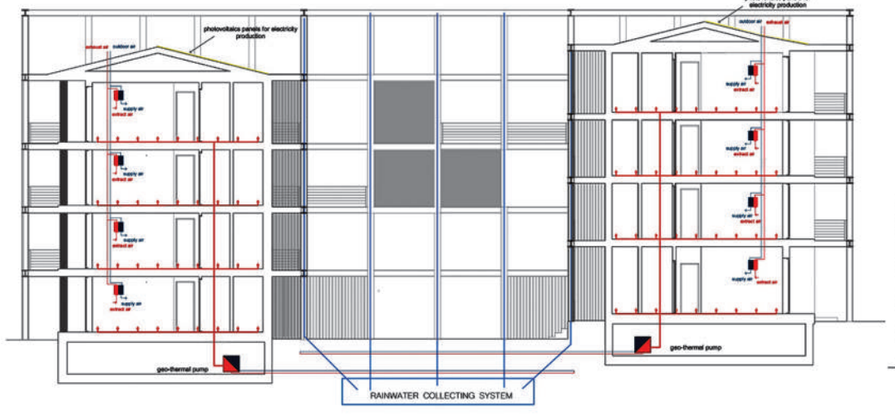
Tallinn University of Technology

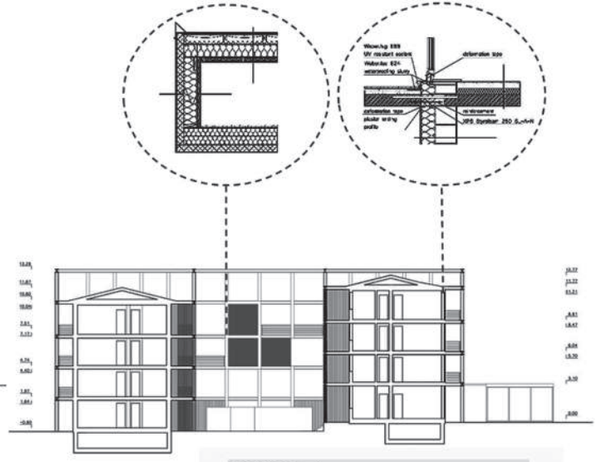
EXISTING BUILDINGS

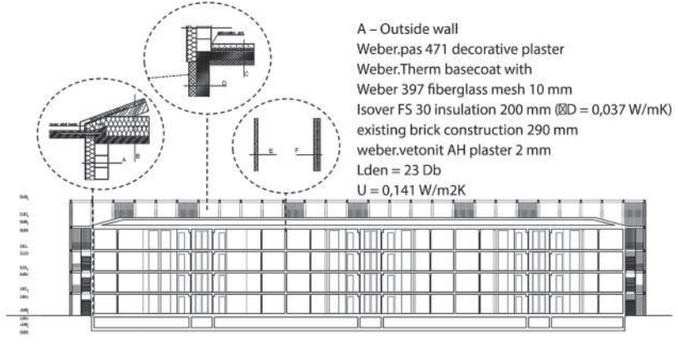
FINAL DESIGN



ENERGY PLAN

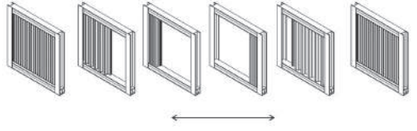


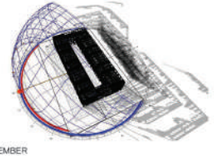




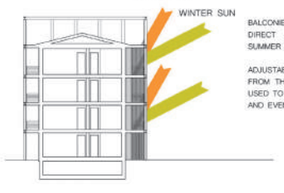
A – Outside wall
Weber.pas 471 decorative plaster
Weber.Therm basecoat with
Weber 397 fiberglass mesh 10 mm
Isover FS 30 insulation 200 mm (⌧D = 0,037 W/mK)
existing brick construction 290 mm
weber.vetonit AH plaster 2 mm
Lden = 23 Db
U = 0,141 W/m2K

SHADING SYSTEM AND SUN ANALYSIS



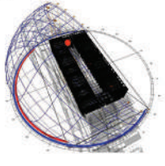


DECEMBER



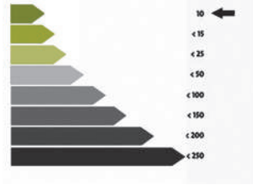
BALCONIES PROTECT THE APARTMENTS FROM THE DIRECT SUNLIGHT THAT COMES FROM THE HIGH SUMMER SUN

ADJUSTABLE SHADING PROTECTS THE APARTMENTS FROM THE LOWER WINTER SUN AND IT CAN ALSO BE USED TO BLOCK DIRECT SUNLIGHT FROM THE MORNING AND EVENING SUN



JULY

Specific Heat Demand		
Transmission Heat Losses:	32004.71	kWh/a
Ventilation Heat Losses:	23794.16	kWh/a
Total Heat Losses:	55798.87	kWh/a
Internal Heat Gains:	17061.32	kWh/a
Solar Heat Gains:	29413.21	kWh/a
Total Heat Gains:	41801.73	kWh/a
Annual Heat Demand:	13997.14	kWh/a
Specific Heat Demand:	6.53	kWh/(m²a)



more about the project on **www.isover-students.com**

II PRIZE
ESTONIA
National Stage 2017

ANNIKA LAIDROO

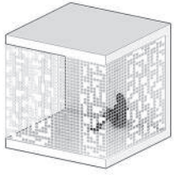
PRIIT RANNIK

Tallinn University of Technology

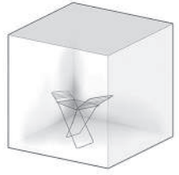
Urban Regeneration of a community in Madrid
Madrid, Spain

III PRIZE
MULTI**COMFORT** House Students Contest International stage, Madrid 2017

ROOM. INSULATED ROOM.



TERRACE. PERFORATED METAL SCREENS.



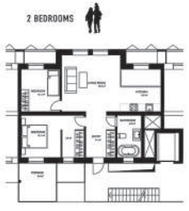
STORAGE. UNHEATED ROOM FOR STORAGE/LAUNDRY.

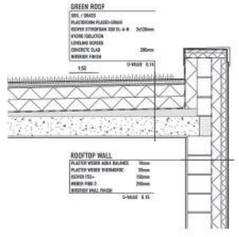
BALCONY. BOXES THAT NEED SOUTH WINDOWS HAVE EXTRA BALCONY FOR SHADING.

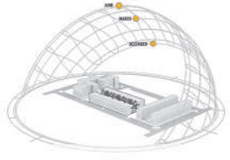
ROOFTOP 1:200 I BUILDING 2

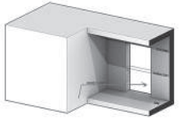
TYPICAL FLOOR 1:200 I BUILDING 2

GROUND FLOOR BUILDING 1&2



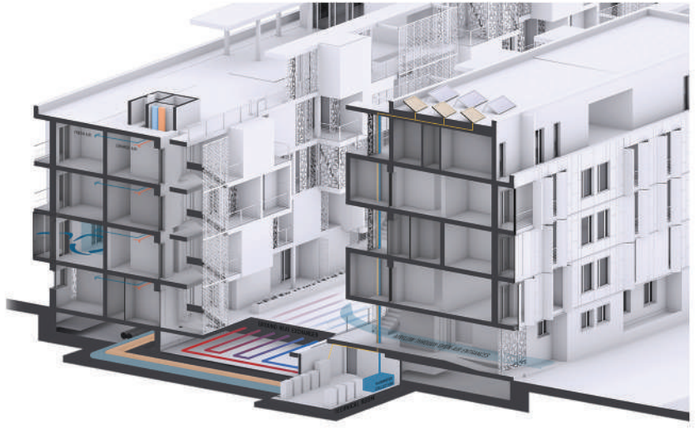


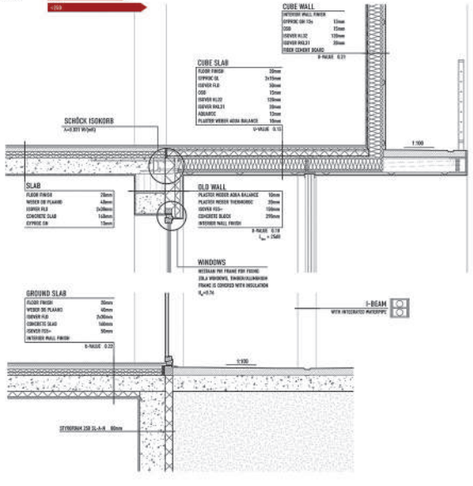




CALCULATIONS. MCH DESIGNER.

ANNUAL HEAT DEMAND	10.47 kWh/m²a
ANNUAL COOLING DEMAND	24.94 kWh/m²a
OVERHEATING	0.00%





more about the project on **www.isover-students.com**

Urban Regeneration of a community in Madrid

Madrid, Spain

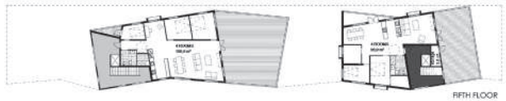
I PRIZE
FINLAND
National Stage 2017

ELINA AHO-KEMPPAINEN

Tampere University of Technology


BASIC FLOORPLAN

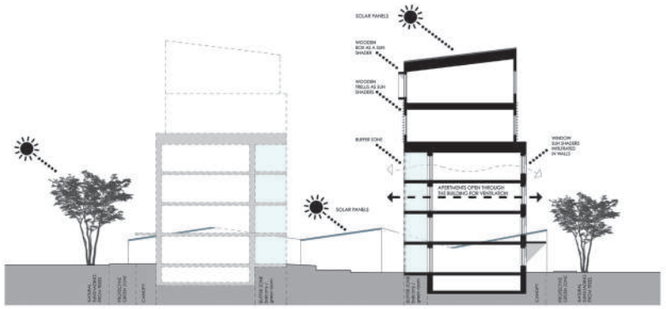

FOURTH FLOOR

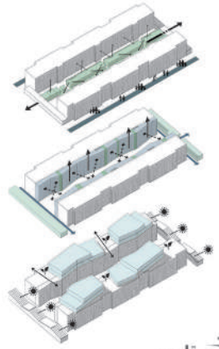

FIFTH FLOOR

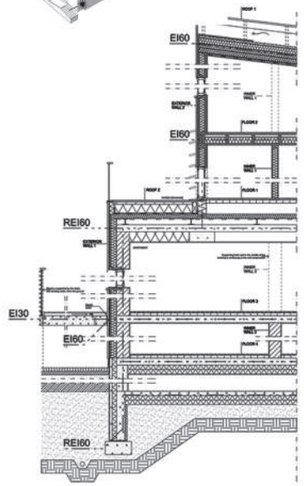

ELEVATION TO THE STREET


ELEVATION TO THE COURTYARD


SECTION OF THE BUILDING


PASSIVE ENERGY SYSTEMS OF THE BUILDING





more about the project on **www.isover-students.com**

Urban Regeneration of a community in Madrid

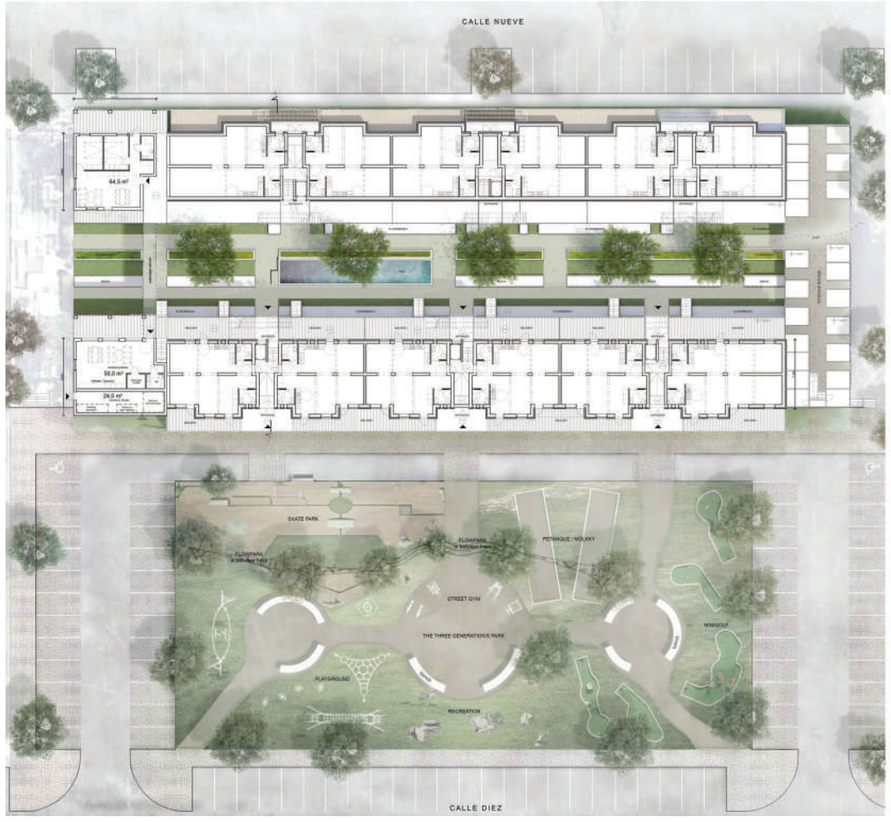
Madrid, Spain

II PRIZE
FINLAND
National Stage 2017

SEVERI HELLSTEN

Tampere University of Technology

GROUNDFLOOR PLAN 1:200



VARIATIONS OF THE PLAN 1:200


19,5 m² Apartment

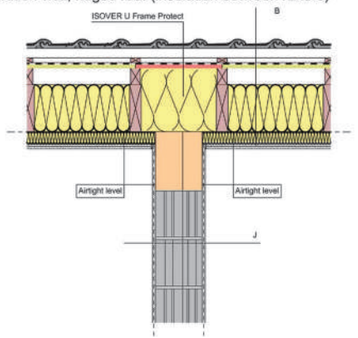

30,0 m² Apartment


71,0 m² Apartment

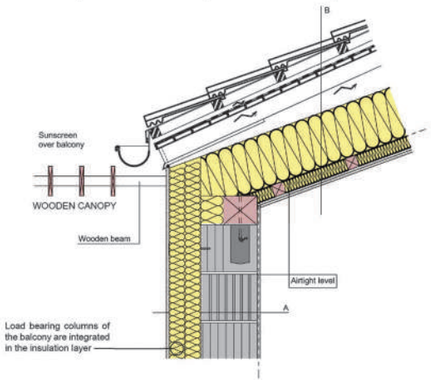

60,5 m² Apartment

STRUCTURAL DETAILS 1:20

Partition wall, ridged roof (insulation between rafters)



Monopitch roof structure (solid timber rafters) Eaves



Build-up A in cm REI 60

1,5	Interior plaster
29,0	Vertically perforated brick HLzW
8,0	ISOVER Sillatherm WVP 1-035
8,0	ISOVER Sillatherm WVP 1-035
1,5	Thick plaster

Build-up B in cm REI 60

	Solar roof tiles
5,0	Counter battens 5/8
2,4	Timber panelling with gaps ISOVER Integra ZUB underlay sheeting
2,4	Solid timber panelling Supporting structure + air gap Windshield ISOVER Supporting structure + air gap
26,0	ISOVER Integra ZKF 1-032 bet. Rafters 6/26 e=80cm, 13% 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

Build-up C in cm REI 60 ≥58dB

	Floor covering
5,0	Screed with underfloor heating Separating layer
3,0	ISOVER Akustic EP 3
1,5	Leveling plaster
16,0	Reinforced concrete ceiling
1,5	Thick plaster

Build-up D in cm

	Floor covering
5,0	Screed Vapour retarder and separating layer
4,0	ISOVER Exporit EPS 100/035
3,0	ISOVER Akustic EP 1
16,0	Reinforced concrete ceiling
12,0	ISOVER Topdec DP 1-032 ULTIMATE

Build-up E in cm (Plinth insulation)

6,0	ISOVER Topdec DP 1-032 ULTIMATE
1,5	Interior plaster
25,0	Concrete wall
0,1	Bitumen preliminary coating
0,5	Sealing against moisture
15,0	ISOVER Exporit EPS PDP 1 (up to 3m installation depth) or PDP 2 (up to 6 m installation depth)
0,6	Thin plaster coat

Urban Regeneration of a community in Madrid

Madrid, Spain

III PRIZE
FINLAND
National Stage 2017

VERNA ISOMURSU

Tampere University of Technology

CURRENTLY:

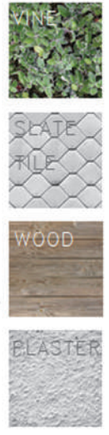
STEP 1:

STEP 2: ACCESSIBILITY

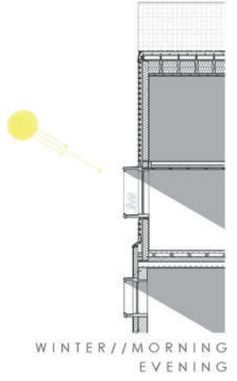
STEP 4: NEW APARMENTS

END RESULT: COSY,GREEN&

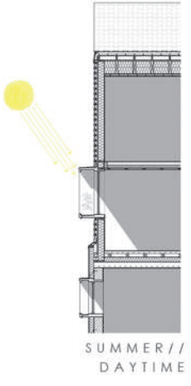
STREET SIDE FACADE



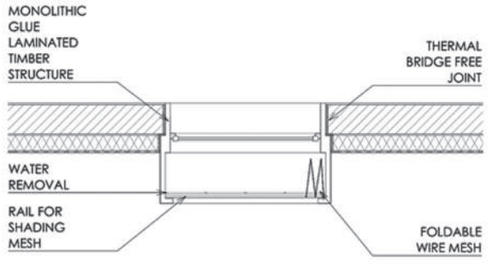
WINDOW FRAMINGS:



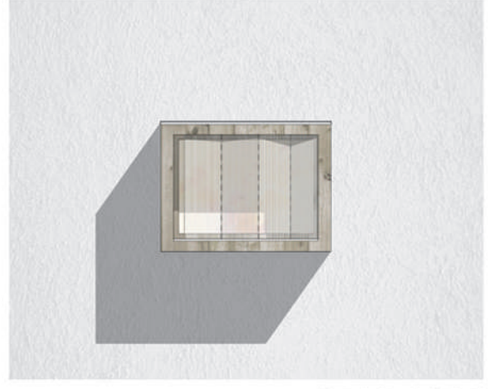
WINTER//MORNING EVENING



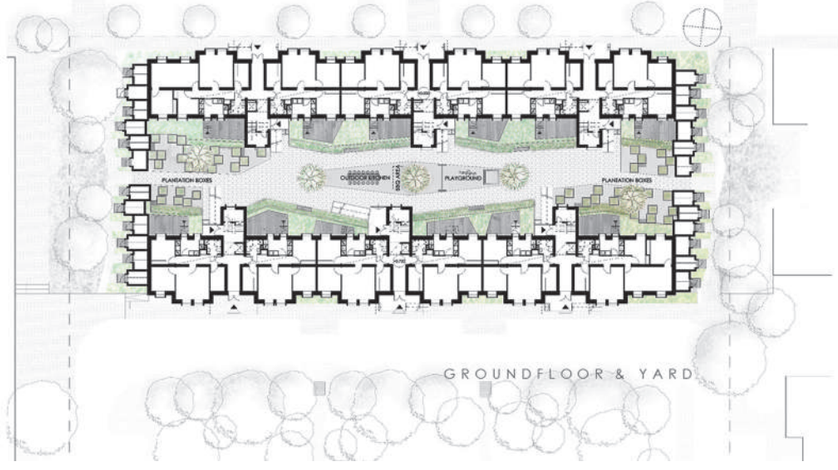
SUMMER// DAYTIME



FRAMING PRINCIPLE

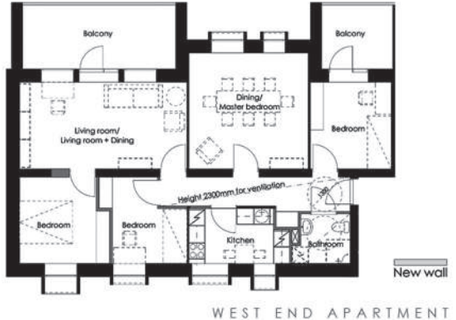


FOLDABLE MESH



GROUNDFLOOR & YARD

EXISTING APARTMENTS:



WEST END APARTMENT

more about the project on **www.isover-students.com**

Urban Regeneration of a community in Madrid

Madrid, Spain

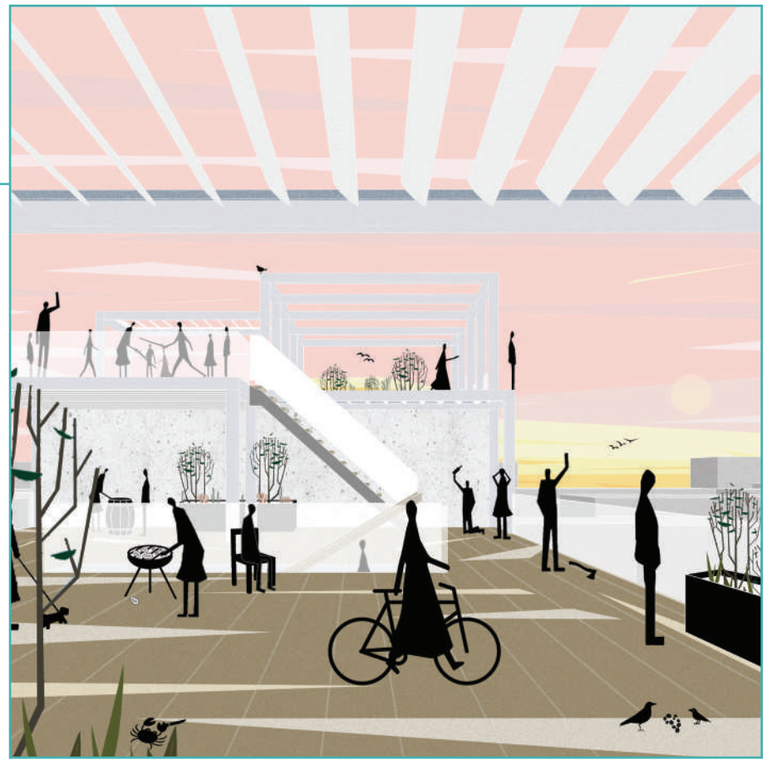
I PRIZE
FRANCE
National Stage 2017

HUGUES AZAMBRE

CHARLES BUGNY

THOMAS MAGNAVAL

ENSA Paris Malaquais

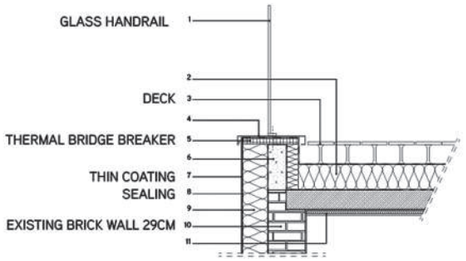


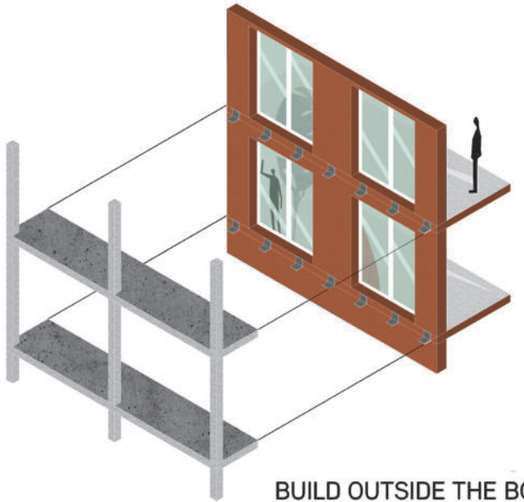
MASTER PLAN - 1:500

GROUND FLOOR - 1:200

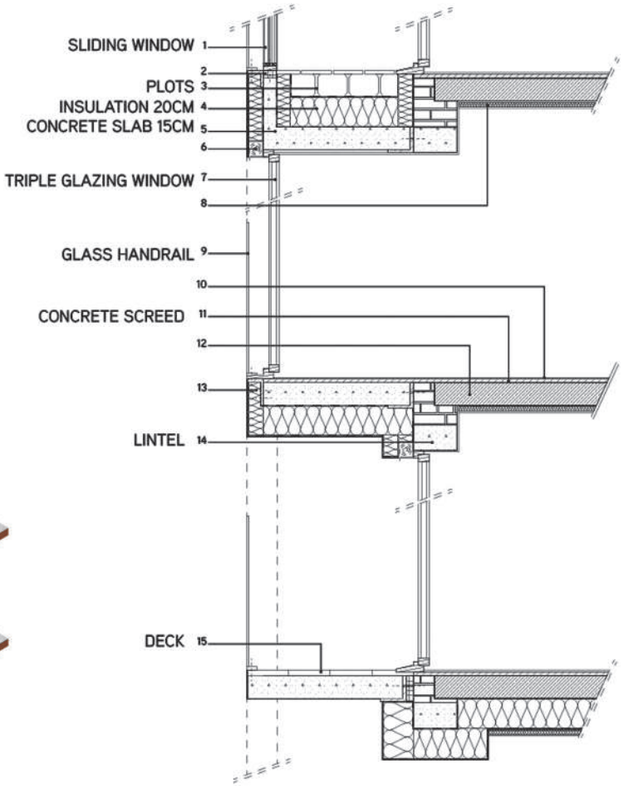
SHARED SPACES ON THE ROOF

ACROTERION DETAIL - 1:25





BUILD OUTSIDE THE BOX



FACADE DETAIL - 1:25

more about the project on **www.isover-students.com**

Urban Regeneration of a community in Madrid

Madrid, Spain

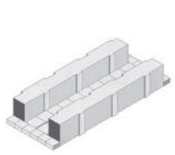
II PRIZE
FRANCE
National Stage 2017

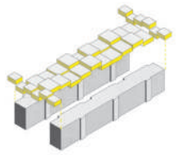
LUCAS ALEZRA

YASMINE SABBAH

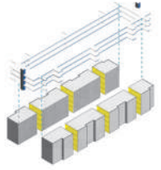
ENSA Paris Malaquais

CONCEPT DESIGN

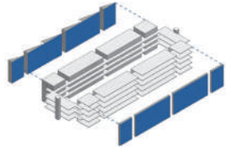




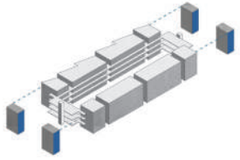
UNCLUTTER



CIRCULATE



EXPAND

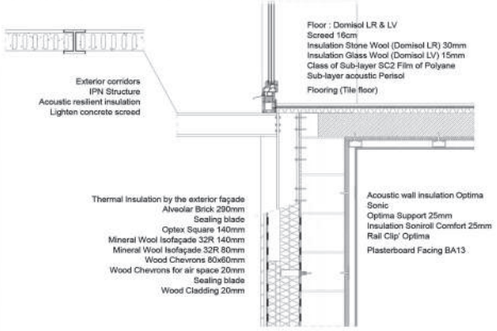


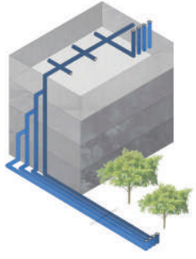
STOCK

ACCESS / COMMON SPACES / ATMOSPHERE

2450m² of Park and 1900m² of Garden

STRUCTURE / EFFICIENCY / INSTALLATION





VENTILATION

EFFICIENCY

NATURAL RESSOURCES

more about the project on **www.isover-students.com**

Urban Regeneration of a community in Madrid

Madrid, Spain

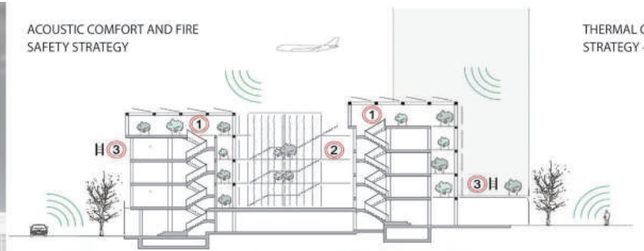
I PRIZE
GERMANY
National Stage 2017

ALEXANDER GLÜCK

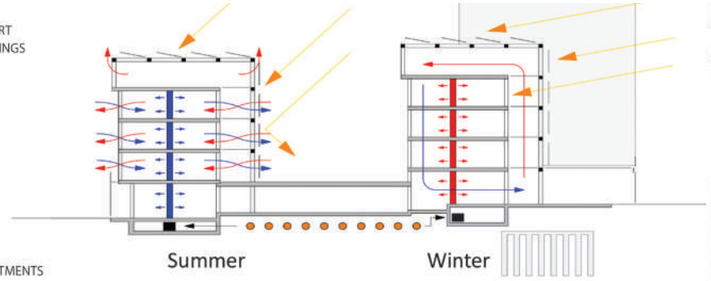
MIRIAM LEUZZI

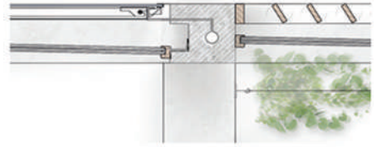
Hochschule Darmstadt

ACOUSTIC COMFORT AND FIRE SAFETY STRATEGY

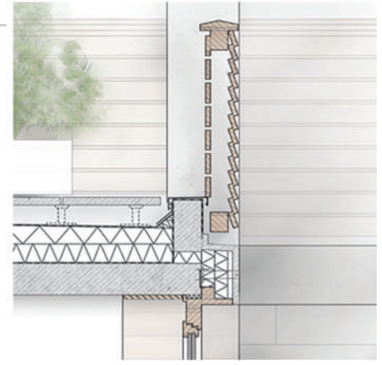


THERMAL COMFORT STRATEGY - BUILDINGS





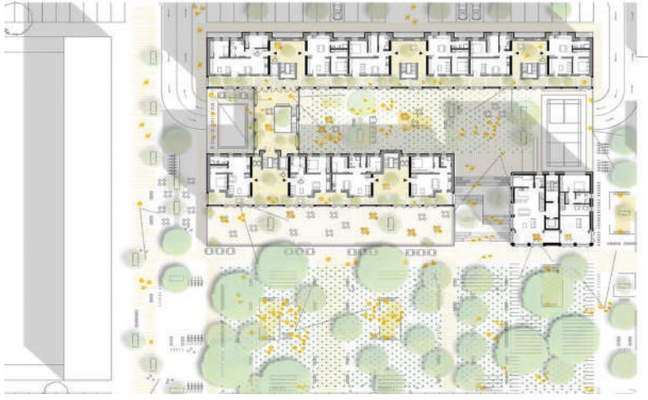
MONO PITCHED



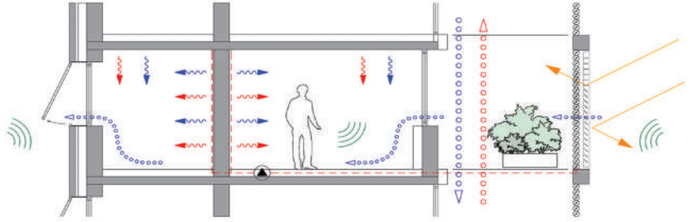
CROSS-SECTION

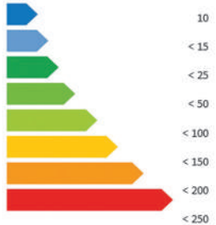
RENOVATED APARTMENTS

Single-glazing box-type window
4cm Prefabricated concrete
Pedestal storage
0.8cm Double layer roof and sealing
8cm sheeting, bonded
10cm ISOVER Exporit EPS 200/035 Gdc
ISOVER Exporit EPS 200/035 FD
Vapour retarder
16cm Leveling layer, bitumen perforated glass-mat sheeting
Reinforced concrete ceiling



THERMAL COMFORT STRATEGY – APARTMENTS





WALL AGAINST UNHEATED AIR

Flexible metal shading
30cm Prefabricated concrete
Heat reservoir and shading
Photovoltaics
Single-glazing box-type window
2.5m Terrace
Double-glazing box-type
29cm window
16cm Vertically perforated brick HlzW
ISOVER Sillatherm WVP 1-035
2.5cm Vapour retarder and separathing layer
Wooden wall cladding

more about the project on **www.isover-students.com**

Urban Regeneration of a community in Madrid

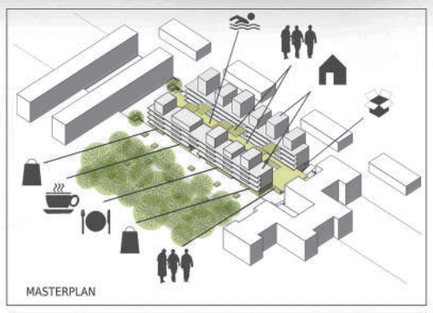
Madrid, Spain

II PRIZE
GERMANY
National Stage 2017

JASMINA HERRMANN

LAILA HODROJ

Hochschule Darmstadt

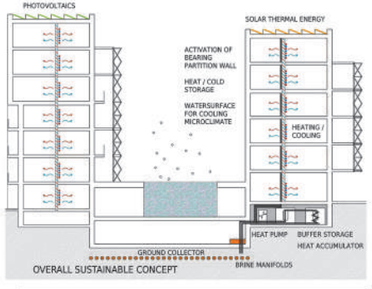

MASTERPLAN

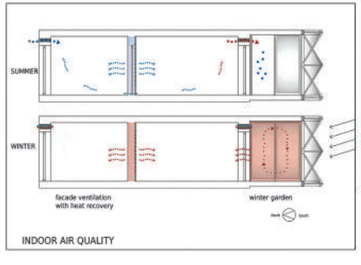

LEISURE TIME ACTIVITIES
FOR INHABITANTS
FIRST FLOOR
M 1:200

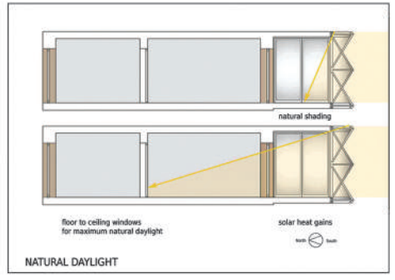

LONGITUDINAL SECTION
M 1:200

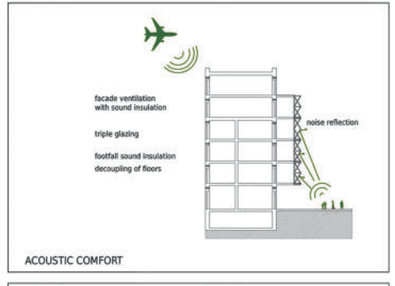

CROSS SECTION
M 1:200

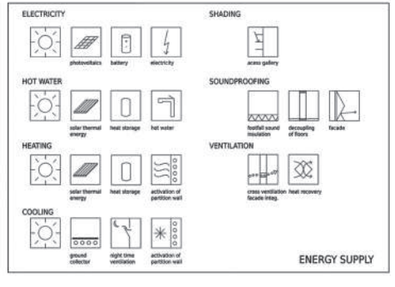

groundfloor rooftop house
first floor rooftop house
ROOFTOP HOUSES PLANS
M 1:200

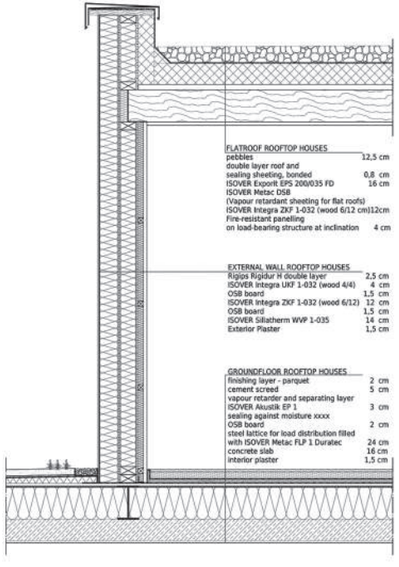

PHOTOVOLTAICS
SOLAR THERMAL ENERGY
ACTIVATION OF BEARING PARTITION WALL
HEAT / COLD STORAGE
WATERSURFACE FOR COOLING MICROCLIMATE
HEATING / COOLING
HEAT PUMP
BUFFER STORAGE
HEAT ACCUMULATOR
GROUND COLLECTOR
BRINE MANIFOLDS
OVERALL SUSTAINABLE CONCEPT

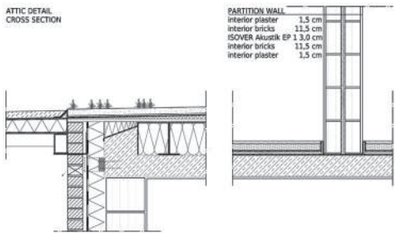

SUMMER
WINTER
facade ventilation with heat recovery
winter garden
INDOOR AIR QUALITY


natural shading
floor to ceiling windows for maximum natural daylight
solar heat gains
NATURAL DAYLIGHT


facade ventilation with sound insulation
triple glazing
footfall sound insulation
decoupling of floors
noise reflection
ACOUSTIC COMFORT


ELECTRICITY
photovoltaics
battery
electricity
HOT WATER
solar thermal energy
heat storage
hot water
HEATING
solar thermal energy
heat storage
activation of partition wall
COOLING
ground collector
night time ventilation
activation of partition wall
SHADING
access gallery
SOUNDPROOFING
footfall sound insulation
decoupling of floors
facade
VENTILATION
cross ventilation facade integ.
heat recovery
ENERGY SUPPLY


FLATROOF ROOFTOP HOUSES
pebbles 12,5 cm
double layer roof and sealing sheeting, bonded 0,8 cm
ISOVER Exporit EPS 200/035 FD 16 cm
ISOVER Metac DSB
(Vapour retardant sheeting for flat roofs)
ISOVER Integra ZKF 1-032 (wood 6/12 cm)12cm
Fire-resistant panelling
on load-bearing structure at inclination 4 cm
EXTERNAL WALL ROOFTOP HOUSES
Rigips Rigidur H double layer 2,5 cm
ISOVER Integra UKF 1-032 (wood 4/4) 4 cm
OSB board 1,5 cm
ISOVER Integra ZKF 1-032 (wood 6/12) 12 cm
OSB board 1,5 cm
ISOVER Silitherm WVP 1-035 14 cm
Exterior Plaster 1,5 cm
GROUNDFLOOR ROOFTOP HOUSES
finishing layer - parquet 2 cm
cement screed 5 cm
vapour retarder and separating layer
ISOVER Akustik EP 1 3 cm
sealing against moisture xxxx
OSB board 2 cm
steel lattice for load distribution filled
with ISOVER Metac FLP 1 Duratec 24 cm
concrete slab 16 cm
interior plaster 1,5 cm


ATTIC DETAIL
CROSS SECTION
PARTITION WALL
interior plaster 1,5 cm
interior bricks 11,5 cm
ISOVER Akustik EP 1 3,0 cm
interior bricks 11,5 cm
interior plaster 1,5 cm

Urban Regeneration of a community in Madrid

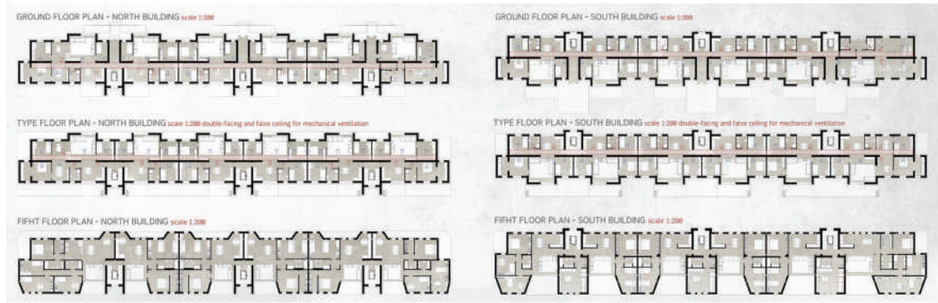
Madrid, Spain

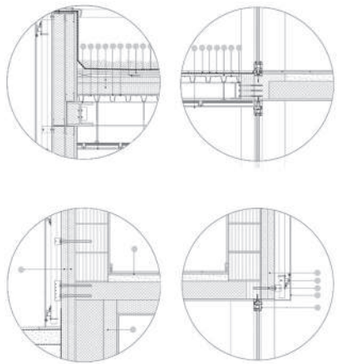
I PRIZE
ITALY
National Stage 2017

EVA BIAVA

MATTEO CANTAMESSA

Politechnica of Milan





more about the project on **www.isover-students.com**

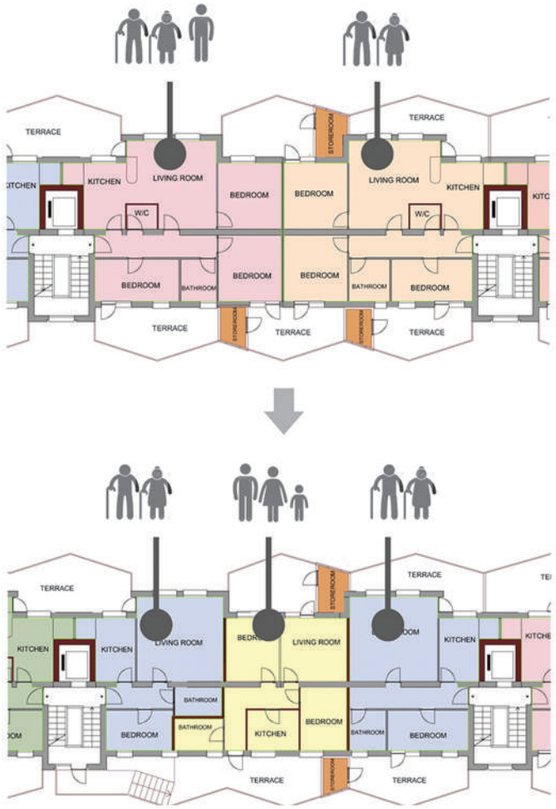
Urban Regeneration of a community in Madrid

Madrid, Spain

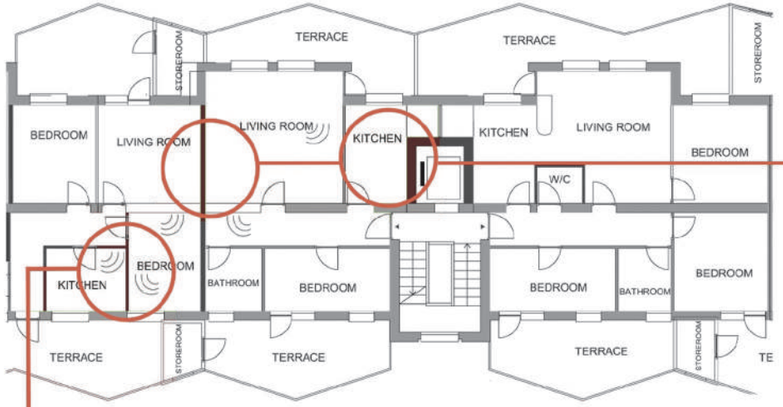
I PRIZE
KAZAKHSTAN
National Stage 2017

ELFIYA KHAMZINA

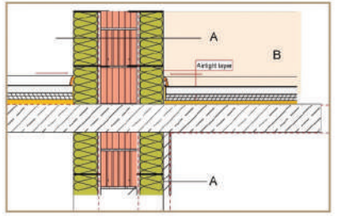
University of KazGASA



Variant of apartment redesign for young families

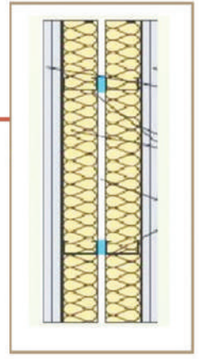


Acoustic comfort

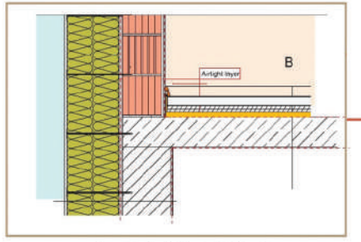


Layer build-up A in cm

1,0 Interior plaster
1,6 Gypros 12,5+12,5
7,5 Isover Sound insulation
24 Brick wall
7,5 Isover Sound insulation
1,6 Gypros 12,5+12,5
1,0 Interior plaster

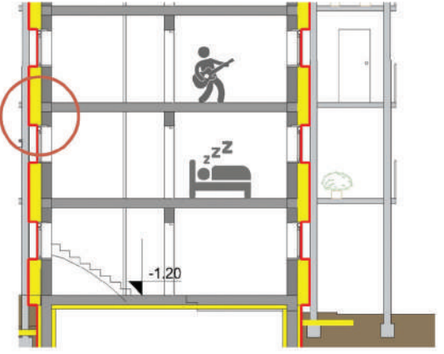


Partition wall
1,6 Gypros 12,5+12,5
2,5 Isover Sound insulation
3,4 Steel profile



Layer build-up B in cm

Floor covering
5,0Cement screed
Separating layer
1,5Thermal insulation
18,0Concrete ceiling
1,0Interior plaster



more about the project on **www.isover-students.com**

Urban Regeneration of a community in Madrid

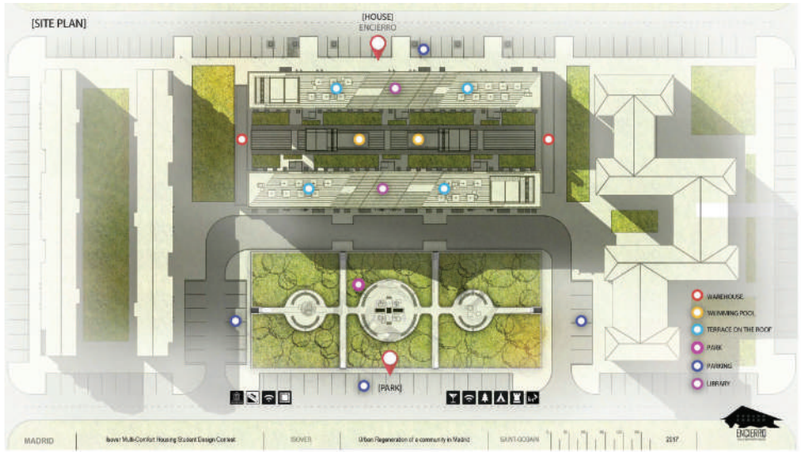
Madrid, Spain

I PRIZE
KYRGYZSTAN
National Stage 2017

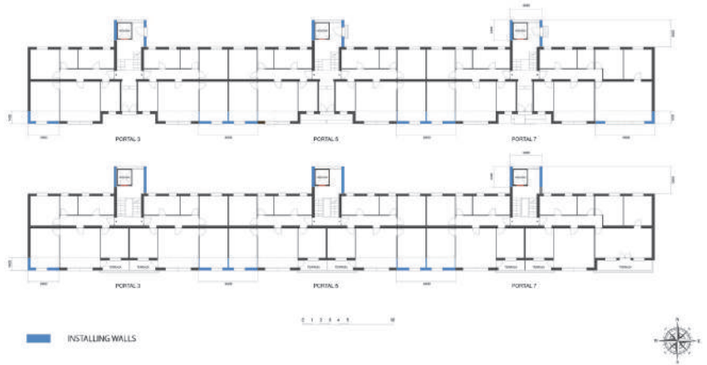
ISKRA MOLDALIEVA

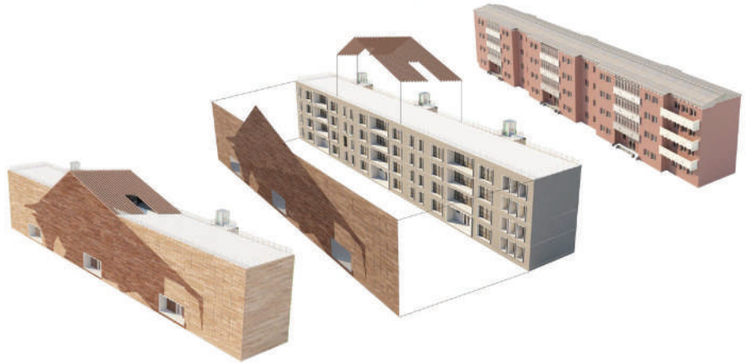
MARAT BEKOV

Kyrgyz State University of Construction

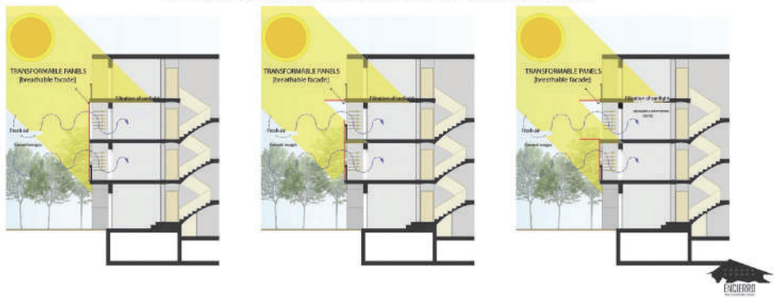


[WALL MOUNTING PLAN]

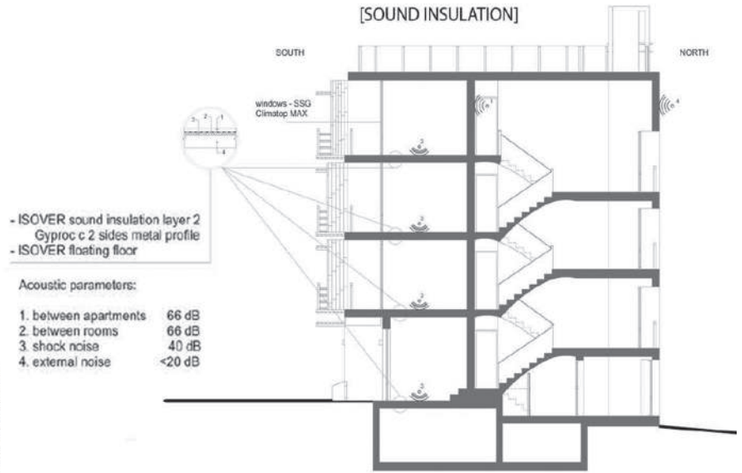


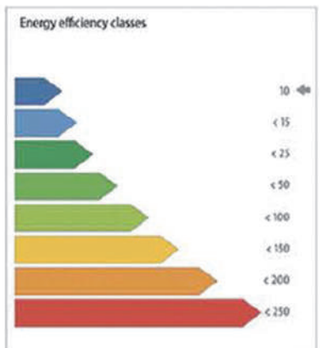


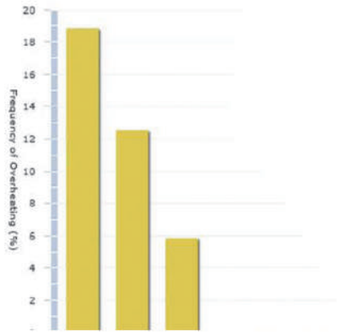
[SUN-PROTECTIVE PANELS OF TRANSFORMABLE TYPE WITH EXTENDABLE BALCONY]



[SOUND INSULATION]







Urban Regeneration of a community in Madrid

Madrid, Spain

I PRIZE
LATVIA
National Stage 2017

AIVA DORBE

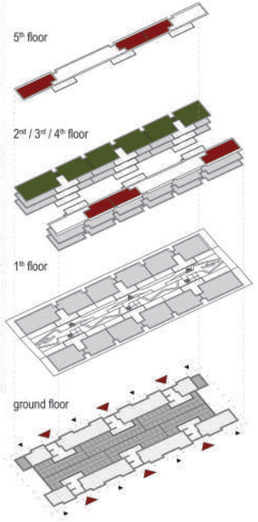
LAUMA KALNINA

Riga Technical University

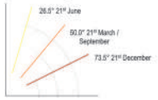
I PRIZE

MULTI**COMFORT** House Students Contest International stage, Madrid 2017

functional schemes



sun angle in Madrid



residents diversity

young people / student

seniors

new families

18 new apartments
12 based on existing apartment plan
6 studio type apartments

new apartments

new studio type apartments

existing apartments

storages / garbage can

public facilities

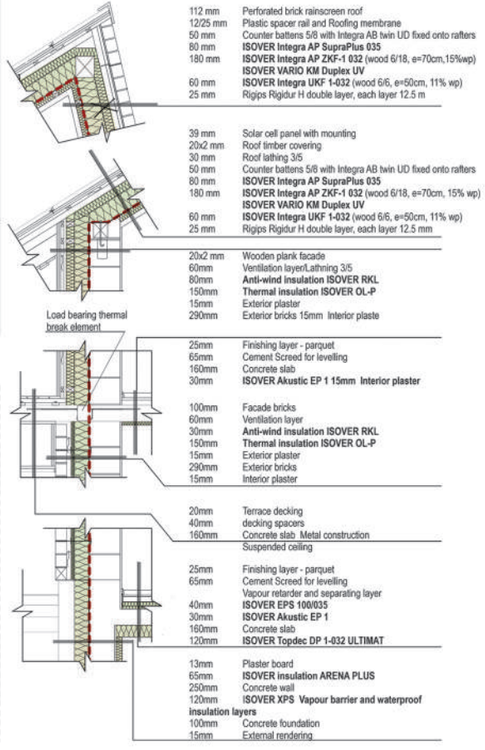
entrance hall / roof terace

entrance for residents

entrance to public facilities

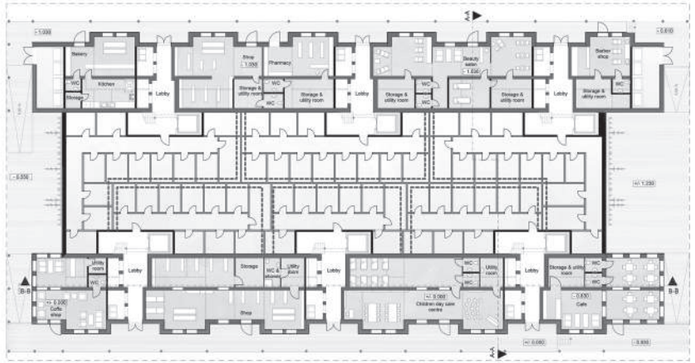
4th floor plan scale 1:200

details scale 1:20

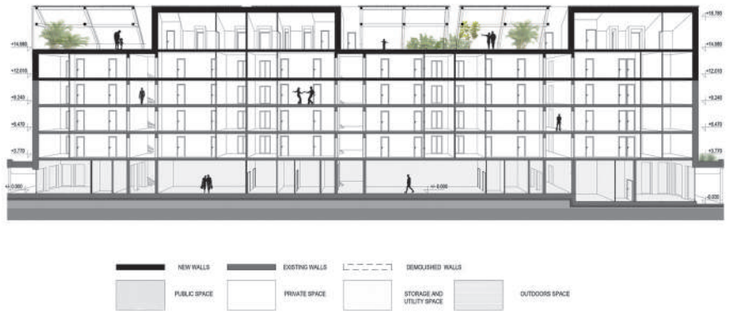


112 mm	Perforated brick rainscreen roof
12/25 mm	Plastic spacer rail and Roofing membrane
50 mm	Counter battens 5/8 with Integra AB twin UD fixed onto rafters
80 mm	**ISOVER Integra AP SupraPlus 035**
180 mm	**ISOVER Integra AP ZKF-1 032** (wood 6/18, e=70cm,15%wp) **ISOVER VARIO KM Duplex UV**
60 mm	**ISOVER Integra UKF 1-032** (wood 6/6, e=50cm, 11% wp)
25 mm	Rigips Rigidur H double layer, each layer 12.5 m
39 mm	Solar cell panel with mounting
20x2 mm	Roof timber covering
30 mm	Roof lathing 3/5
50 mm	Counter battens 5/8 with Integra AB twin UD fixed onto rafters
80 mm	**ISOVER Integra AP SupraPlus 035**
180 mm	**ISOVER Integra AP ZKF-1 032** (wood 6/18, e=70cm, 15% wp) **ISOVER VARIO KM Duplex UV**
60 mm	**ISOVER Integra UKF 1-032** (wood 6/6, e=50cm, 11% wp)
25 mm	Rigips Rigidur H double layer, each layer 12.5 mm
20x2 mm	Wooden plank facade
60mm	Ventilation layer/Lathning 3/5
80mm	**Anti-wind insulation ISOVER RKL**
150mm	**Thermal insulation ISOVER OL-P**
15mm	Exterior plaster
290mm	Exterior bricks 15mm Interior plaste
25mm	Finishing layer - parquet
65mm	Cement Screed for levelling
160mm	Concrete slab
30mm	**ISOVER Akustic EP 1 15mm Interior plaster**
100mm	Facade bricks
60mm	Ventilation layer
30mm	**Anti-wind insulation ISOVER RKL**
150mm	**Thermal insulation ISOVER OL-P**
15mm	Exterior plaster
290mm	Exterior bricks
15mm	Interior plaster
20mm	Terrace decking
40mm	decking spacers
160mm	Concrete slab Metal construction
	Suspended ceiling
25mm	Finishing layer - parquet
65mm	Cement Screed for levelling
	Vapour retarder and separating layer
40mm	**ISOVER EPS 100/035**
30mm	**ISOVER Akustic EP 1**
160mm	Concrete slab
120mm	**ISOVER Topdec DP 1-032 ULTIMAT**
13mm	Plaster board
65mm	**ISOVER insulation ARENA PLUS**
250mm	Concrete wall
120mm	**ISOVER XPS Vapour barrier and waterproof insulation layers**
100mm	Concrete foundation
15mm	External rendering

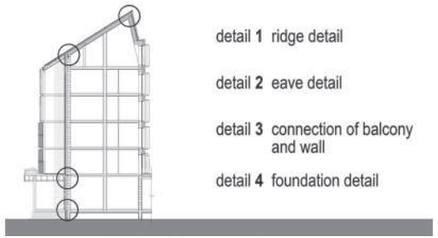
ground floor plan scale 1:200



section B-B scale 1:200



detail scheme section 1:200



detail **1** ridge detail

detail **2** eave detail

detail **3** connection of balcony and wall

detail **4** foundation detail

more about the project on **www.isover-students.com**

I PRIZE
LATVIA
National Stage 2017

LAURA IVANE

INESE GUSTA

Riga Technical University

Urban Regeneration of a community in Madrid

Madrid, Spain

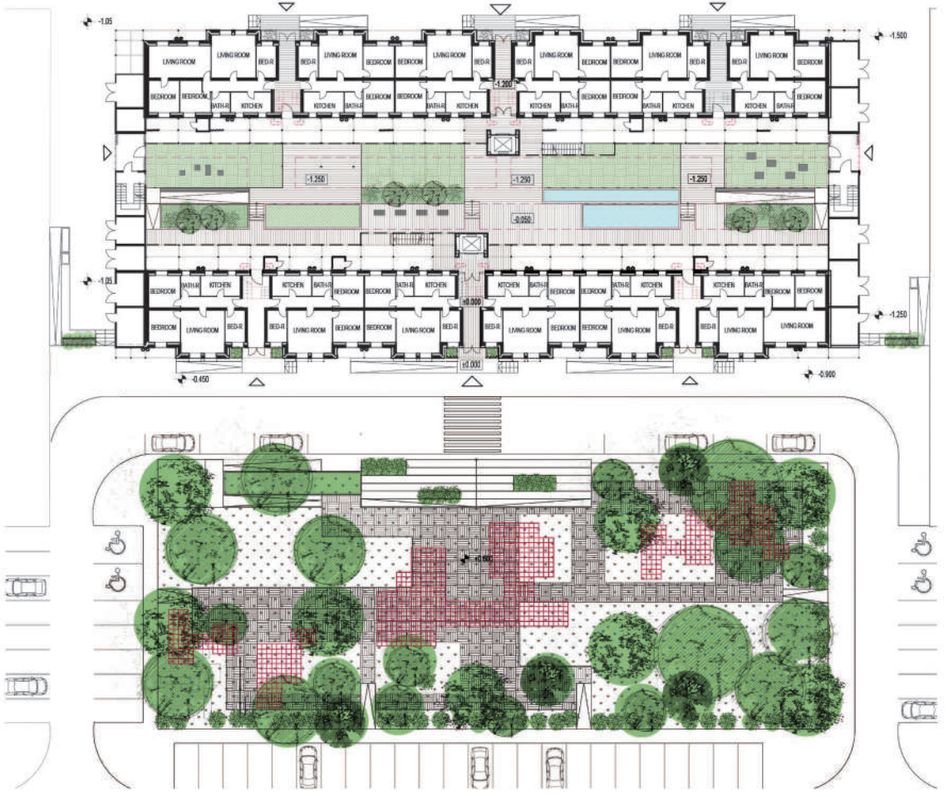
Students prize

MULTI**COMFORT** House Students Contest International stage, Madrid 2017

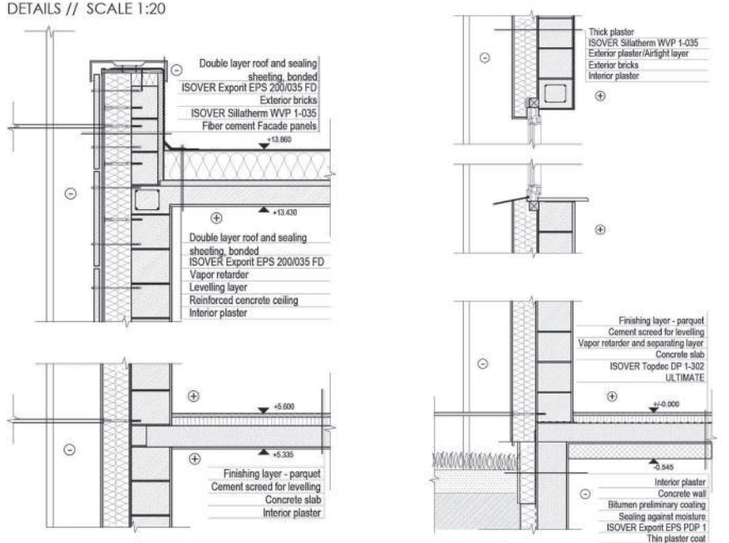
SOUTHERN COURTYARD FACADE // SCALE 1:250

SOUTHERN STREET FACADE // SCALE 1:250

PARK AND BUILDING PLAN // SCALE 1:250



DETAILS // SCALE 1:20



PHPP CALCULATIONS

Specific building demands with reference to the treated floor area

	Treated floor area	2305,0	m²
Space heating	Annual heating demand	9	kWh/(m²a)
	Heating load	9	W/m²
Space cooling	Overall specific space cooling demand	5	kWh/(m²a)
	Cooling load	7	W/m²
	Frequency of overheating (> 25 °C)		%
Primary Energy	Space heating and cooling, dehumidification, household electricity		kWh/(m²a)
	DHW, space heating and auxiliary electricity		kWh/(m²a)
	Specific primary energy reduction through solar electricity		kWh/(m²a)
Airtightness	Pressurization test result n_{50}	1,0	1/h

FORMULA FOR LIVING

more about the project on **www.isover-students.com**

Urban Regeneration of a community in Madrid

Madrid, Spain

I PRIZE
LATVIA
National Stage 2017

MAURĀNS RŪDOLFS

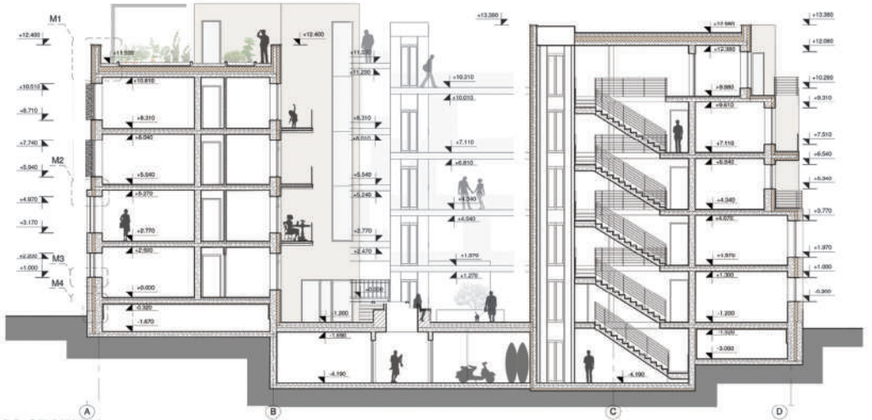
ŠADRINA MADARA

Riga Technical University

GROUND FLOOR PLAN SC 1:200

TYPICAL FLOOR PLAN SC 1:200

4TH FLOOR PLAN SC 1:200



CROSS SECTION SC 1:100

LONGITUDINAL SECTION SC 1:200

Passive House verification

Space heating	Treated floor area	3532 - 8	m^2
	Annual heating demand	8	kWh/(m^2a)
	Heating load	9	W/m^2
Space cooling	Overall specific space cooling demand	3	kWh/(m^2a)
	Cooling load	8	W/m^2
	Frequency of overheating (> 25 °C)		%
Primary Energy	space heating and cooling, dehumidification, DHW, household electricity		kWh/(m^2a)
	DHW, space heating and auxiliary electricity		kWh/(m^2a)
	Specific primary energy reduction through solar electricity		kWh/(m^2a)
Airtightness	Pressurization test result n_{50}	1.0	1/h

M1

Vegetation	
Soil	150mm
Geotextile	
Drainage element Floradrain FD 25	25mm
Protective mat SSM 45	
Root resistant waterproofing	
Thermal insulation ISOVER STYROFOAM DOW 300 SL-A-N	250mm
Waterproofing layer	
Concrete leveling layer	min 40mm
Concrete slab	160mm
Interior plaster	15mm

M2

Interior plaster	15mm
Exterior bricks	29mm
Exterior plaster/Airtight layer	15mm
Mortar WEBER SEPRO 405	
Thermal insulation ISOVER RKL-31 FACADE	150mm
Ventilation layer	35mm
Facade panels Pictura	12mm

M3

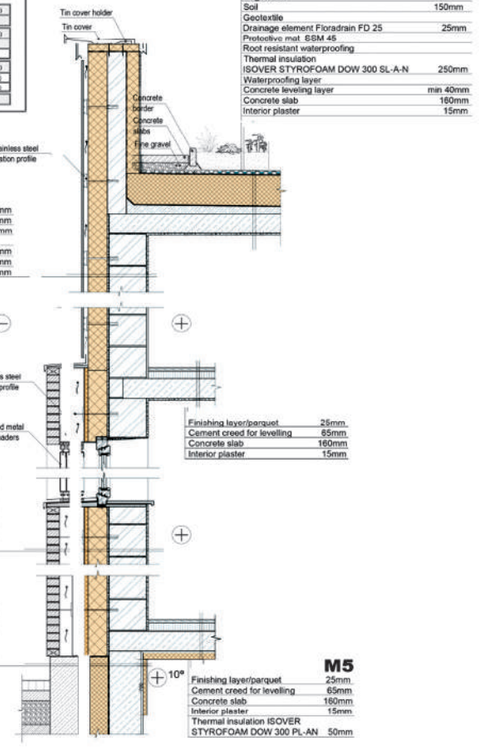
Interior plaster	15mm
Exterior bricks	290mm
Exterior plaster/Airtight layer	15mm
Mortar WEBER SEPRO 405	
Thermal insulation ISOVER OL-P	150mm
Anti-wind insulation ISOVER RKL	30mm
Ventilation layer	60mm
Facade bricks	100mm

M4

Thermal insulation ISOVER STYROFOAM DOW 300 PL-AN	30mm
Interior plaster	15mm
Concrete wall	250mm
Waterproofing layer	
Thermal insulation ISOVER STYROFOAM DOW 300 SL-A-N	150mm
Concrete foundation	220mm

M5

Finishing layer/parquet	25mm
Cement creed for levelling	65mm
Concrete slab	160mm
Interior plaster	15mm
Thermal insulation ISOVER STYROFOAM DOW 300 PL-AN	50mm



DETAILS SC 1:20

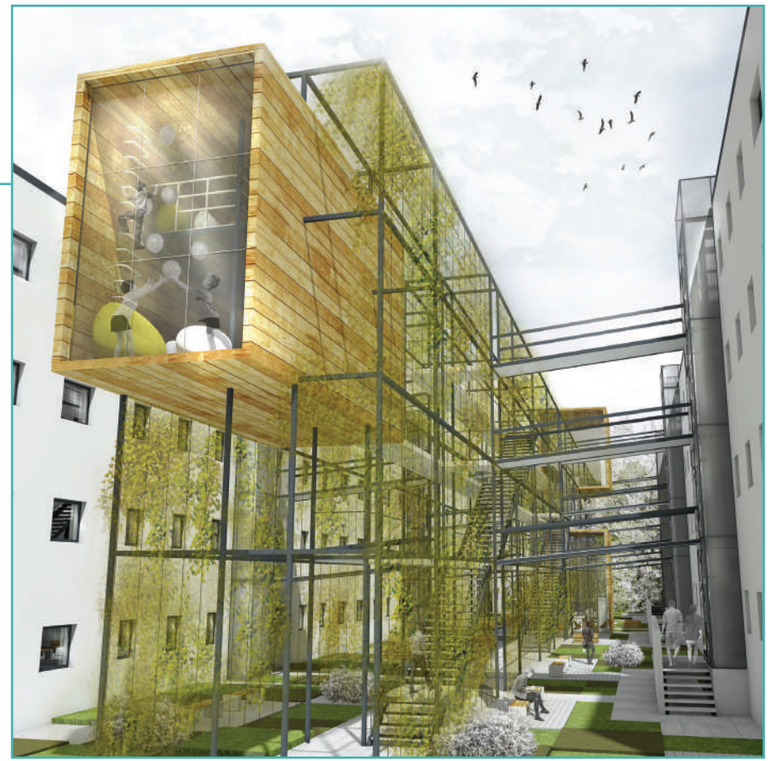
Urban Regeneration of a community in Madrid

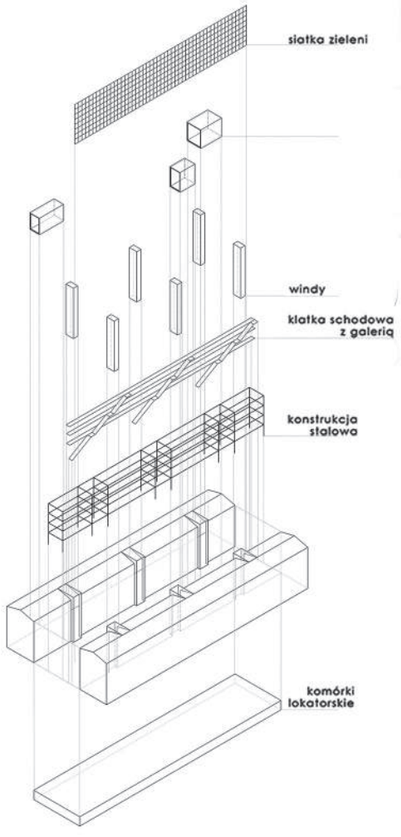
Madrid, Spain

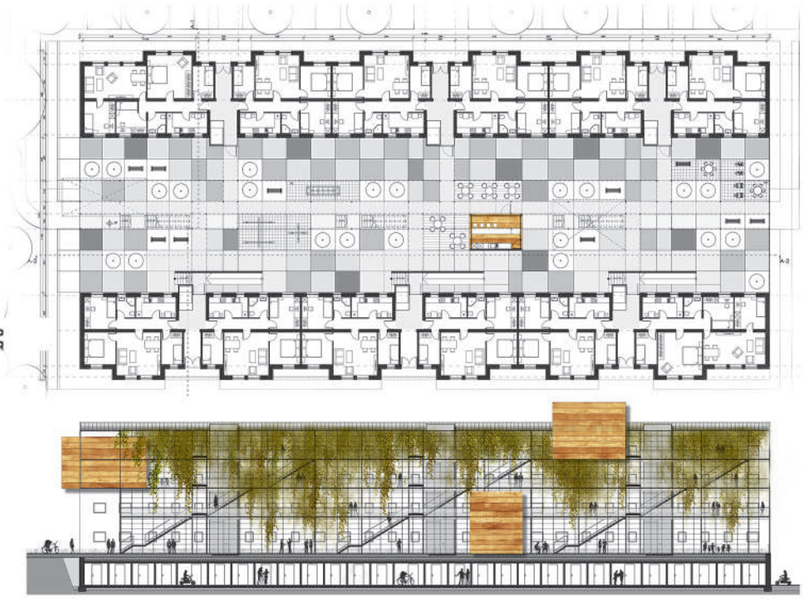
I PRIZE
POLAND
National Stage 2017

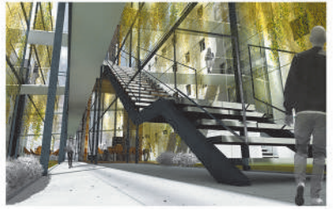
LUIZA KUBIZNA

Silesian University of Technology

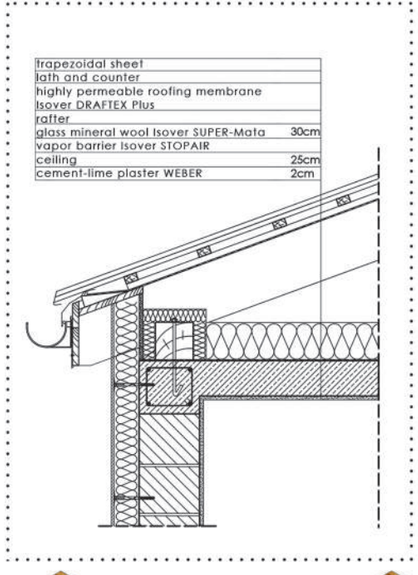


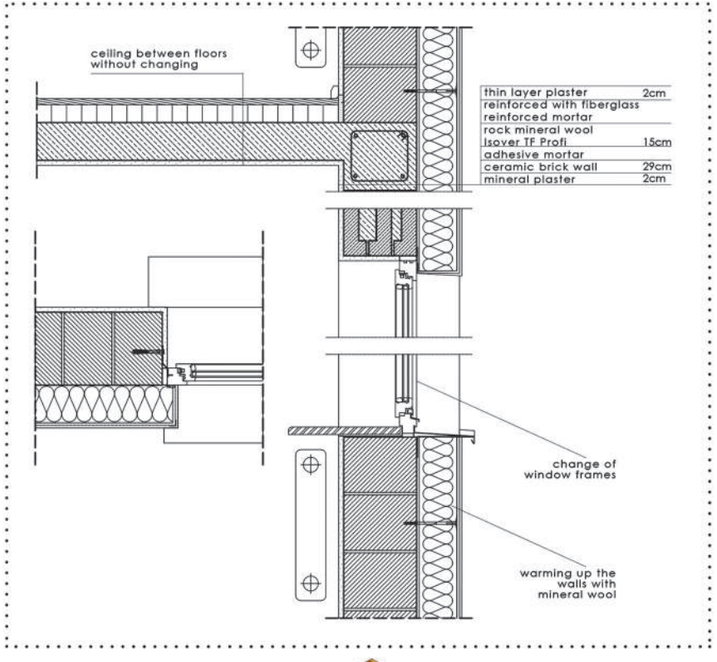


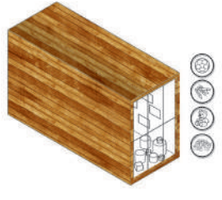


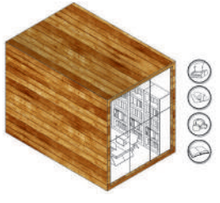


DETAIL









more about the project on **www.isover-students.com**

Urban Regeneration of a community in Madrid

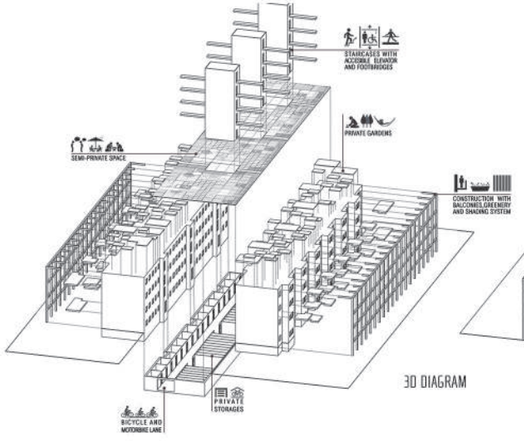
Madrid, Spain

II PRIZE
POLAND
National Stage 2017

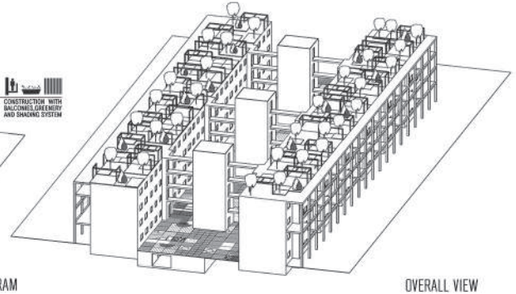
ANNA TOBOREK

JOANNA MACHERA

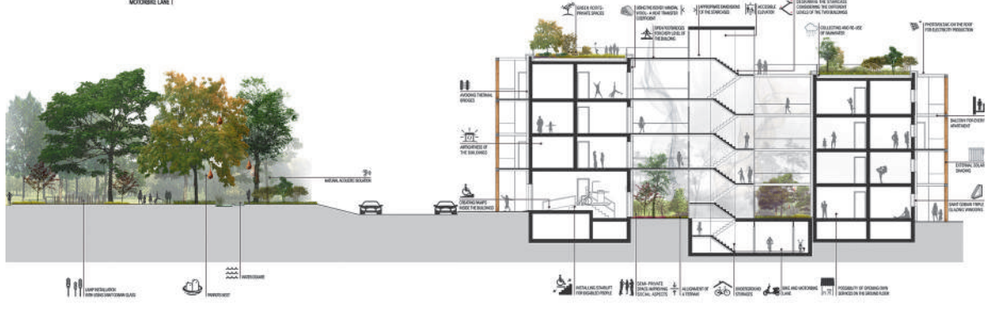
Silesian University of Technology



3D DIAGRAM



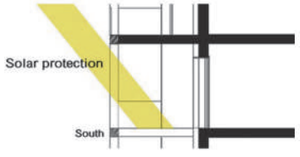
OVERALL VIEW



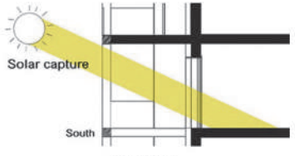
RE-USE OF RAIN WATER

FIRE SAFETY STRATEGY

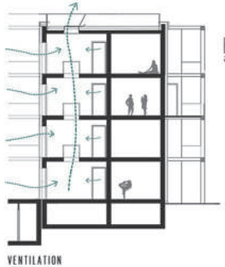
CONTROLLED SUNLIGHT



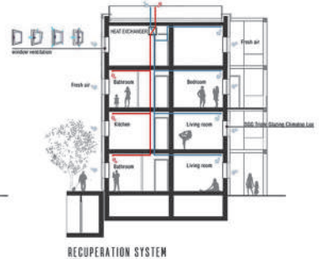
SUMMER



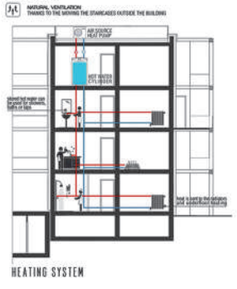
WINTER



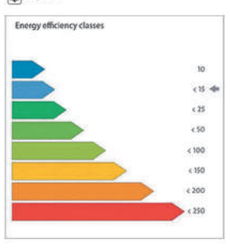
VENTILATION

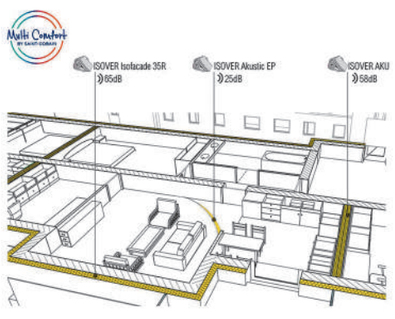


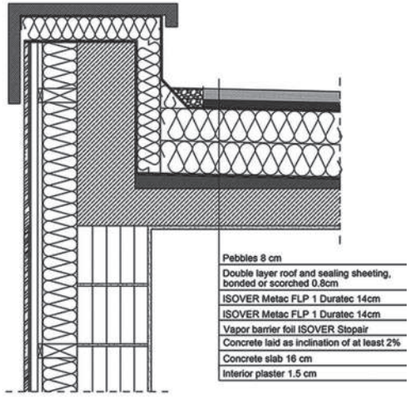
RECUPERATION SYSTEM

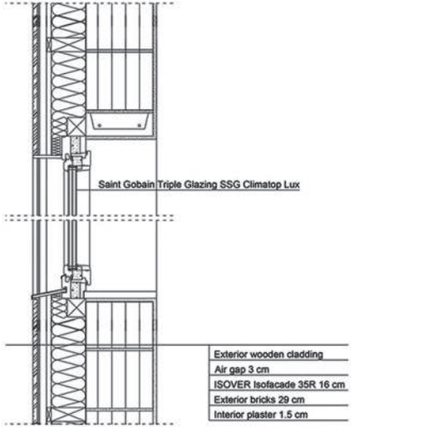


HEATING SYSTEM









Urban Regeneration of a community in Madrid

Madrid, Spain

III PRIZE
POLAND
National Stage 2017

ALEKSANDRA JERSZYŃSKA

PAWEŁ LISIAK

DAMIAN WACHOŃSKI

Wrocław University of Technology

HEAT LOSES

OVERHEATING

SMALL WINDOWS

UNATTRACTIVE BALCONIES

CARS

STREET BARRIER

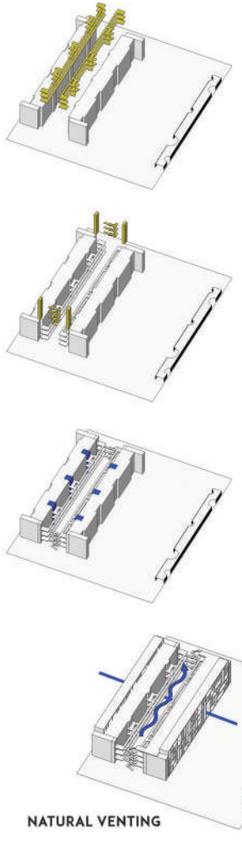
UNUSED POTENTIAL OF THE PARK

UNEXPLOITED ROOF

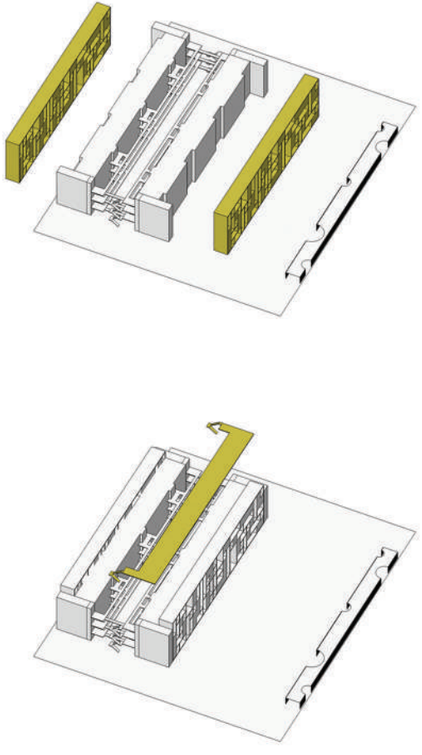
BLOCKING LOCKERS

INNER GREEN YARD

NEW UTILITY ROOF + POOL



NATURAL VENTING



STREET OPENING

PUBLIC PAVILION

UNDERGROUND PARKING

CUBBYHOLES REMOVAL

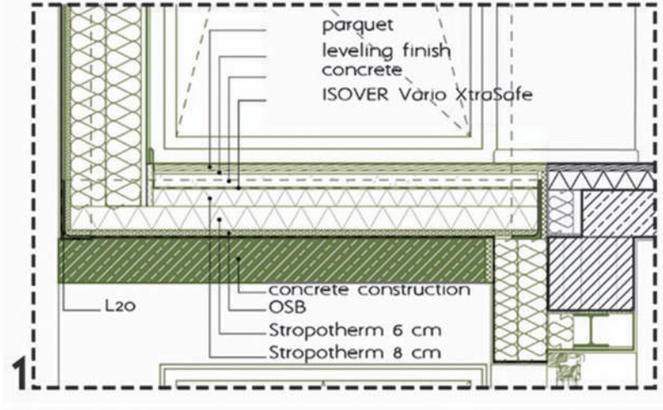
VERTICAL LOCKERS

GALLERIES CREATION

NEW STAIRCASES

STAIRCASES REMOVAL

FLATS EXTENSION



STREET OPENING

PUBLIC PAVILION

UNDERGROUND PARKING

CUBBYHOLES REMOVAL

VERTICAL LOCKERS

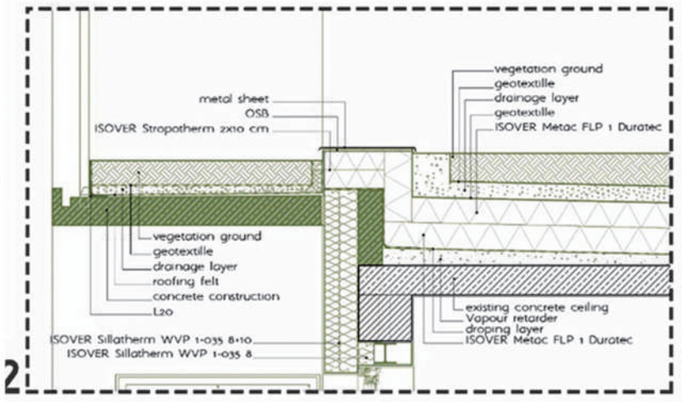
GALLERIES CREATION

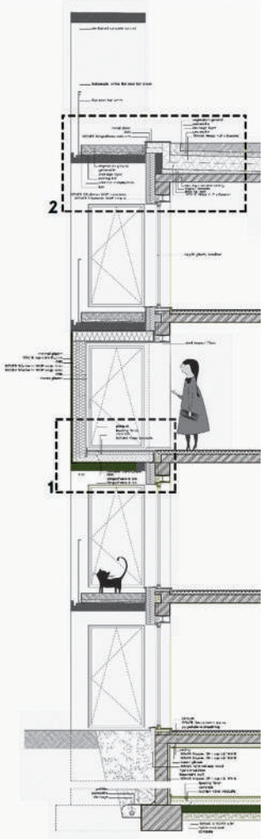
NEW STAIRCASES

STAIRCASES REMOVAL

FLATS EXTENSION

UTILITY ROOF





more about the project on **www.isover-students.com**

Urban Regeneration of a community in Madrid

Madrid, Spain

I PRIZE
ROMANIA
National Stage 2017

FINAGA MIHAI

VERESS SZABOLCS

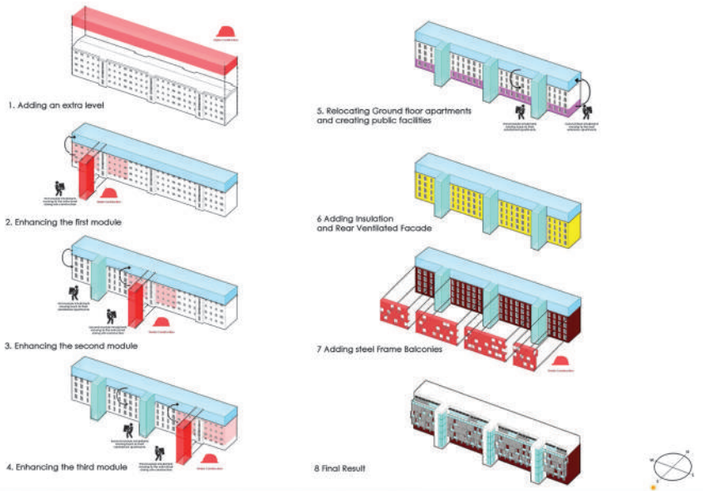
University of Architecture and Urbanism Ion Mincu

FACADE CONFIGURATION

re.hab.it!

BUILDING SCENARIO

re.hab.it!



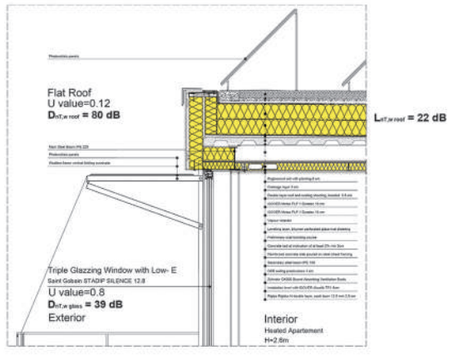
MULTICOMFORT APPROACH

re.hab.it!

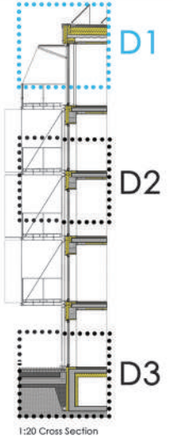
MULTICOMFORT APPROACH

re.hab.it!

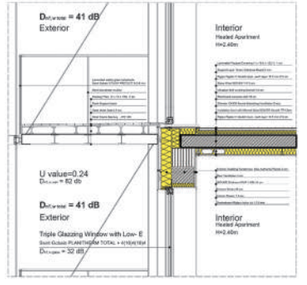
DETAILS



Detail 1



1:20 Cross Section

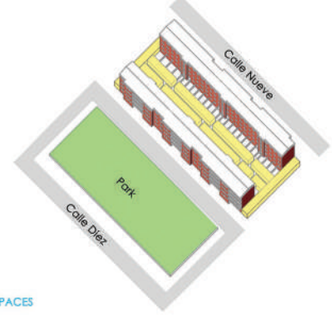


Detail 2

CONTEXT

re.hab.it!

DISSOCIATIVE SPACES



Urban Regeneration of a community in Madrid

Madrid, Spain

I PRIZE
RUSSIA
National Stage 2017

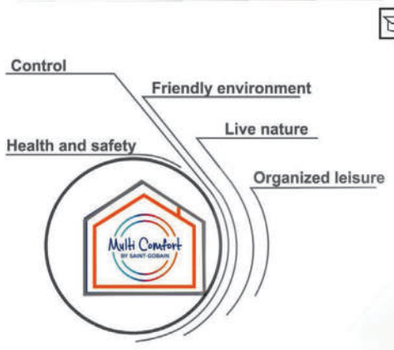
AMIR KYDYEV

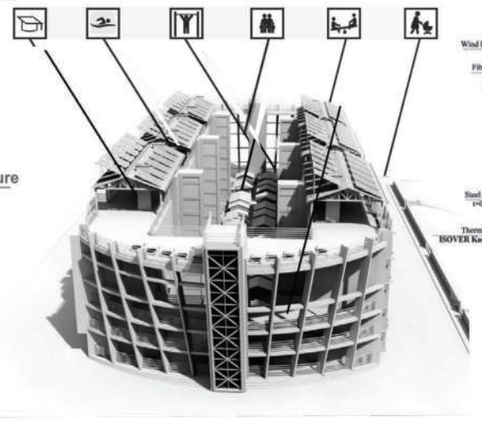
EVGENIY SHABALDIN

YULIYA PETROVA

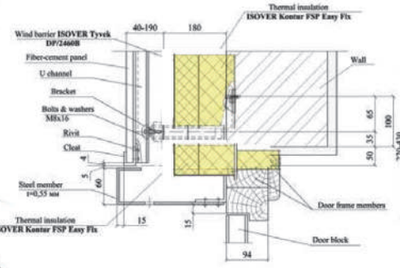
Tomsk State University of Architecture and Building

Western facade

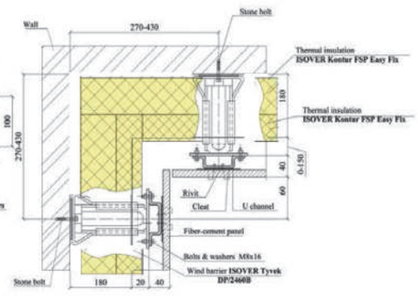




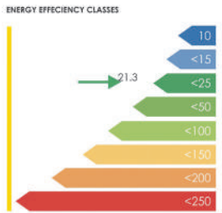
Vertical plan of the wall and door



Internal corner of a wall

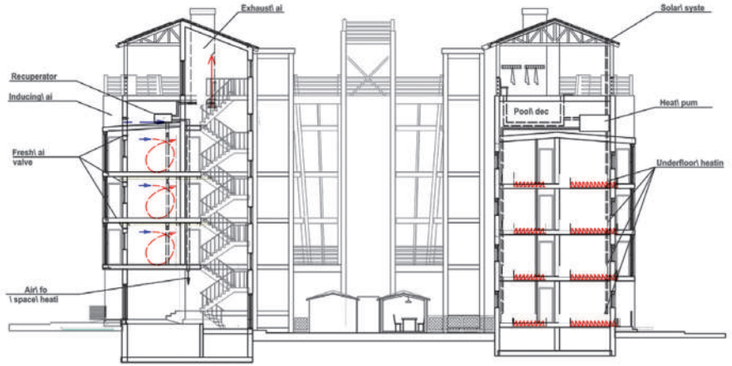


South facade



Ventilating\ syste

Heating\ syste



SCHEME OF VENTILATION AND HEATING

more about the project on **www.isover-students.com**

Urban Regeneration of a community in Madrid

Madrid, Spain

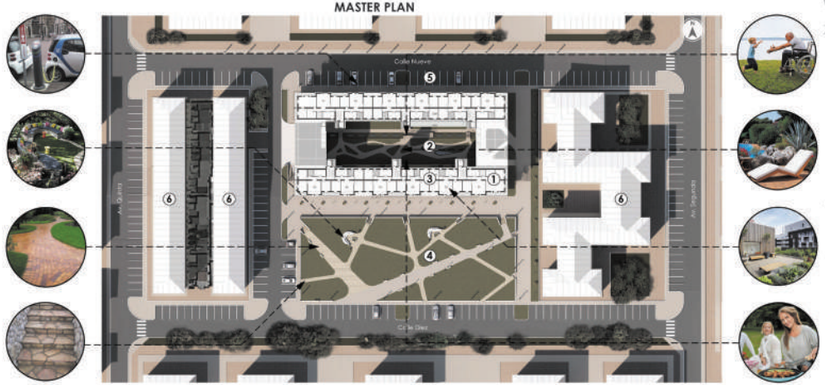
II PRIZE
RUSSIA
National Stage 2017



IULIIA VINOGRADOVA
ALENA KOLESNIKOVA
DENIS SKRIPCHENKO

Tomsk State University of Architecture and Building

MASTER PLAN



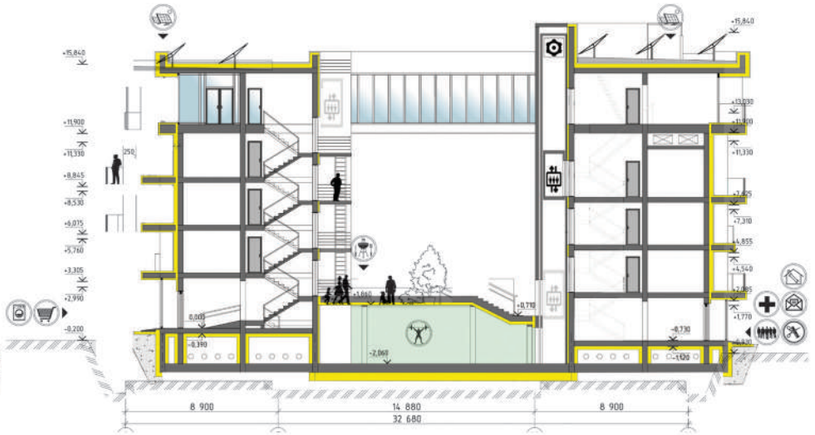
Explication:

1. Residential building;
2. Courtyard;
3. Accessible roof;
4. Park;
5. Electric vehicles parking places
6. Surrounding development

Technical and economic parameters:

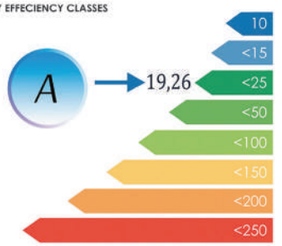
Area of the reconstructed section - 6 267м2;
Built area - 2 210 м2;
Green area - 2 976 м2;
Number of parking places (in the district) - 194;
Number of parking places (in surrounding area) - 61.

ISOVER APPLICATION. SECTIONAL VIEW OF BUILDING



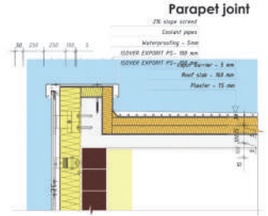
ISOVER APPLICATION. LONGITUDINAL SECTION

ENERGY EFFECIENCY CLASSES

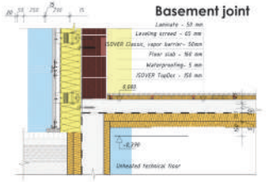


CONSTRUCTION SECTION

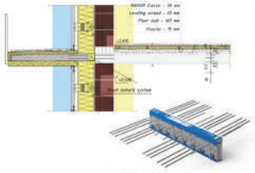
Parapet joint



Basement joint



SCHOCK ISOKORB SYSTEM IN BALCONIES DESIGN



SAGEGLASS GLAZING SYSTEM

SHUTTER SYSTEM

more about the project on **www.isover-students.com**

Urban Regeneration of a community in Madrid

Madrid, Spain

I PRIZE
SLOVAKIA
National Stage 2017

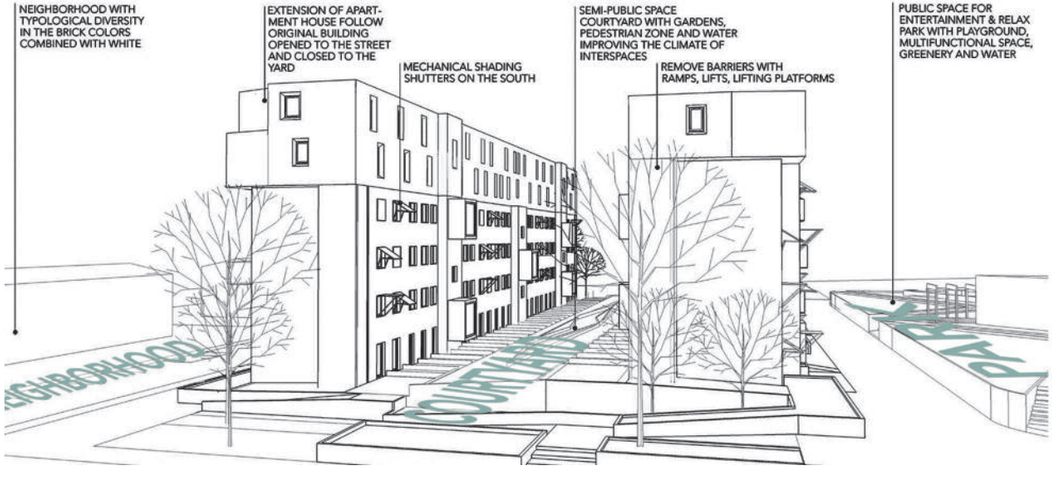
TATIANA DUNAJSKA

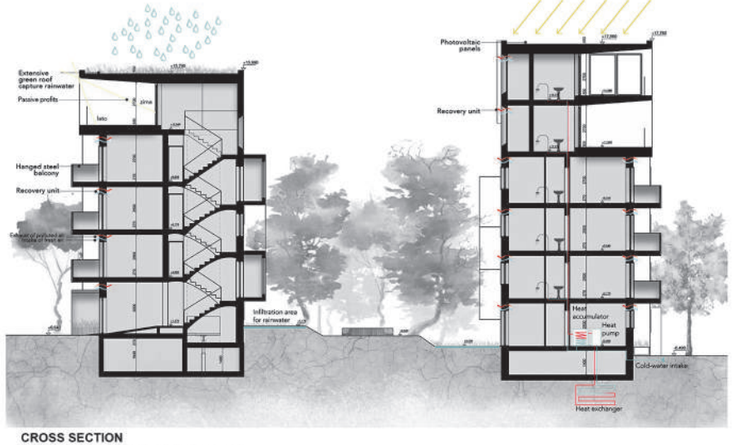
Slovak University of Technology in Bratislava

CONSTRUCTION - DETAILS

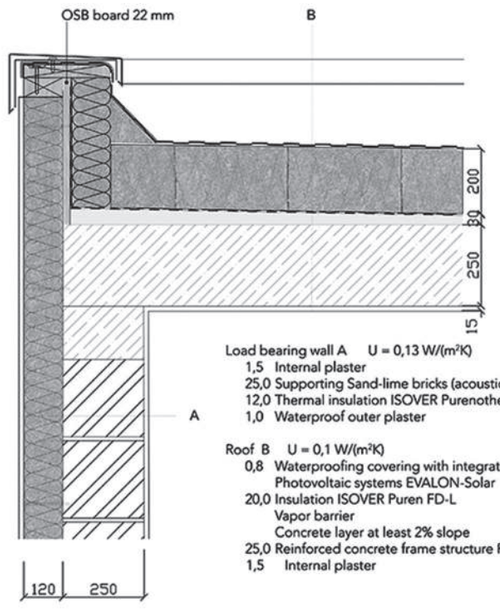
CONCEPT

ELEVATIONS
EAST AND WEST ELEVATION





CROSS SECTION
OPERATION SCHEME OF THE HOUSE



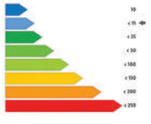
Load bearing wall A U = 0,13 W/(m²K)
- 1,5 Internal plaster
- 25,0 Supporting Sand-lime bricks (acoustic), REIW 180
- 12,0 Thermal insulation ISOVER Purenotherm
- 1,0 Waterproof outer plaster

Roof B U = 0,1 W/(m²K)
- 0,8 Waterproofing covering with integrated Photovoltaic systems EVALON-Solar
- 20,0 Insulation ISOVER Puren FD-L
- Vapor barrier
- Concrete layer at least 2% slope
- 25,0 Reinforced concrete frame structure REI 160
- 1,5 Internal plaster

Calculations

Specific Heat Demand:	13,66 kWh/(m²a)
Specific Cooling Demand:	21,45 kWh/(m²a)
Frequency of Overheating (over 25):	16,20 %

DAYLIGHT
DAYLIGHTING FACTOR



ENERGY EFFICIENCY CLASSES

II **PRIZE**
SLOVAKIA
National Stage 2017

EMA KIABOVA

ROMAN RUHIG

Slovak University of Technology in Bratislava

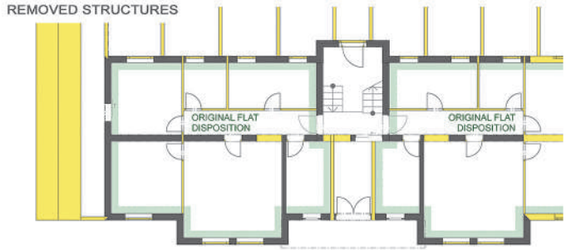
Urban Regeneration of a community in Madrid

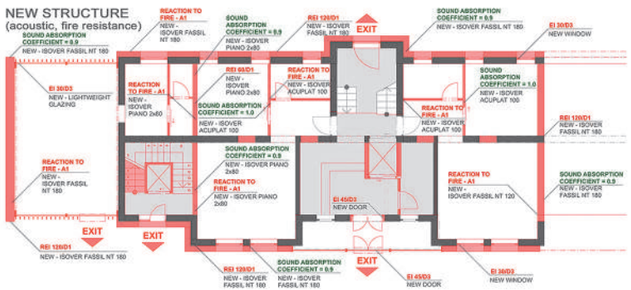
Madrid, Spain

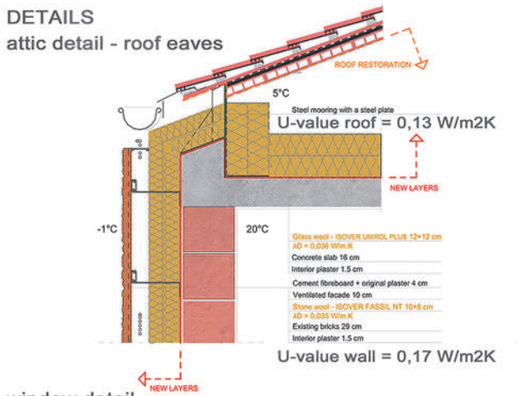
Honorable mention

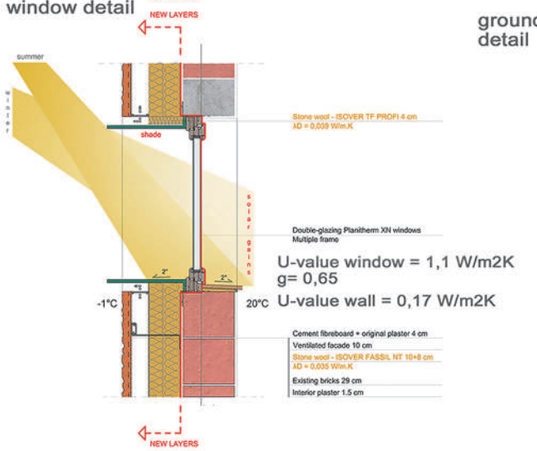
MULTI**COMFORT** House Students Contest International stage, Madrid 2017

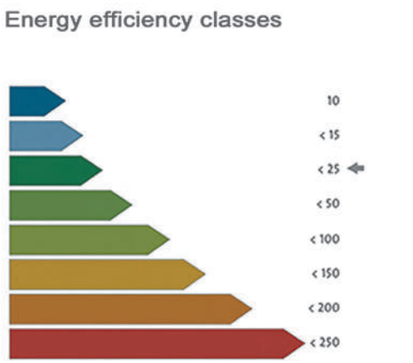
DISPOSITION PROPOSAL
(part of ground floor)

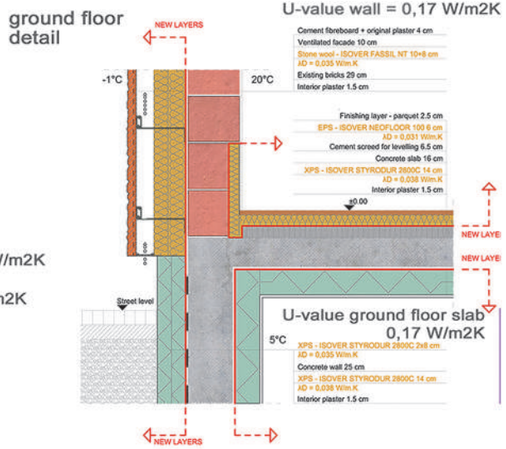












more about the project on **www.isover-students.com**

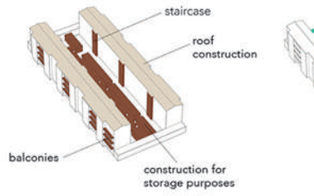
Urban Regeneration of a community in Madrid

Madrid, Spain

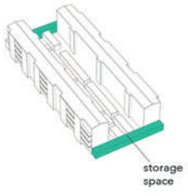
III PRIZE
SLOVAKIA
National Stage 2017

JÚLIA GILÁŇOVÁ

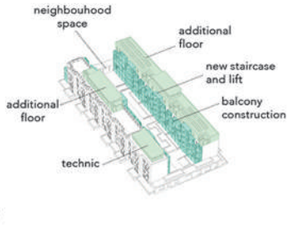
Slovak University of Technology in Bratislava



_ REMOVED CONSTRUCTION



_ PRESERVED CONSTRUCTION



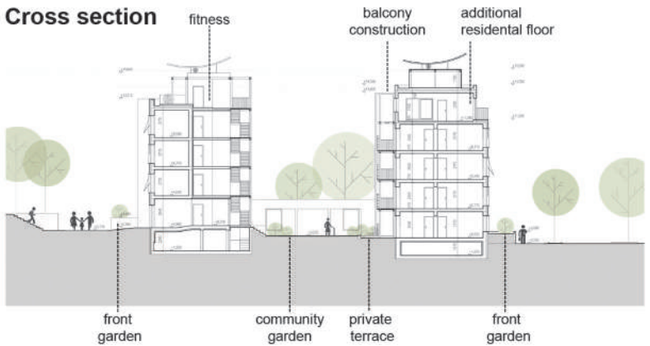
_ NEW CONSTRUCTION

GROUND FLOOR PLAN

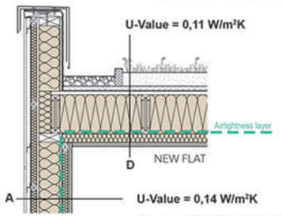
Inner facade

_additional balcony construction

Cross section

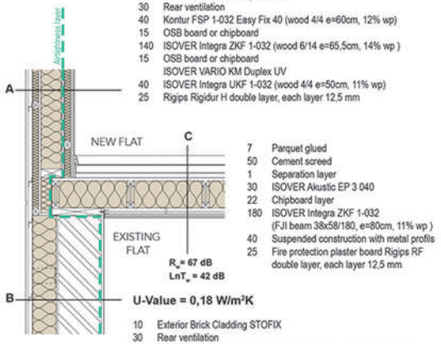


DETAIL 1 - Roof



80	Extensive greening Extensive greening substrate mix for extensive greening (at border area round gravel 16/32)
1	Filter layer - Geotextil Optigreen Type 105
45	Dimpled drainage panel Optigreen FKD 25
1	Protective geotextil Optigreen RMS 500
2	Waterproofing membrane Fatrafol 818/V-UV
24	Wooden composite board
260	ISOVER Integra ZKF 1-032 (FJI beam 38x58/260, 3% wp) ISOVER VARIO KM Duplex UV
60	ISOVER Integra UKF 1-032 (wood 6/6 e=50cm, 11% wp)
25	Rigips Rigidur H double layer, each layer 12,5 mm

10	Exterior Brick Cladding STOFIX
30	Rear ventilation
40	Kontur FSP 1-032 Easy Fix 40 (wood 4/4 e=60cm, 12% wp)
15	OSB board or chipboard
140	ISOVER Integra ZKF 1-032 (wood 6/14 e=65,5cm, 14% wp) OSB board or chipboard ISOVER VARIO KM Duplex UV
40	ISOVER Integra UKF 1-032 (wood 4/4 e=50cm, 11% wp)
25	Rigips Rigidur H double layer, each layer 12,5 mm



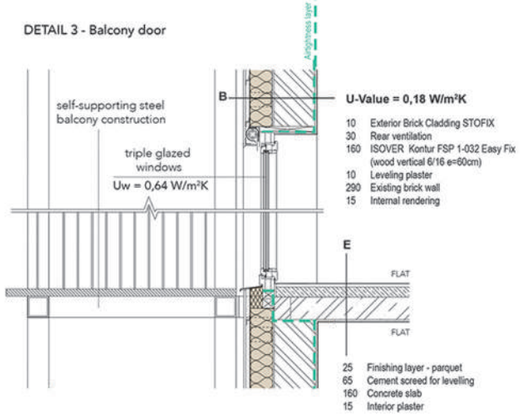
7	Parquet glued
50	Cement screed
1	Separation layer
30	ISOVER Akustic EP 3 040
22	Chipboard layer
180	ISOVER Integra ZKF 1-032 (FJI beam 38x58/180, e=80cm, 11% wp)
40	Suspended construction with metal profils
25	Fire protection plaster board Rigips RF double layer, each layer 12,5 mm

R_w= 67 dB
LnT_w = 42 dB

10	Exterior Brick Cladding STOFIX
30	Rear ventilation
160	ISOVER Kontur FSP 1-032 Easy Fix (wood vertical 6/16 e=60cm)
10	Leveling plaster
290	Original brick wall
15	Internal rendering

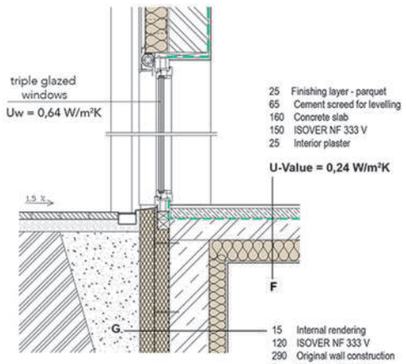
DETAIL 2 - Connection of new construction to the existing structure

DETAIL 3 - Balcony door



10	Exterior Brick Cladding STOFIX
30	Rear ventilation
160	ISOVER Kontur FSP 1-032 Easy Fix (wood vertical 6/16 e=60cm)
10	Leveling plaster
290	Existing brick wall
15	Internal rendering

25	Finishing layer - parquet
65	Cement screed for levelling
160	Concrete slab
15	Interior plaster



25	Finishing layer - parquet
65	Cement screed for levelling
160	Concrete slab
150	ISOVER NF 333 V
25	Interior plaster

15	Internal rendering
120	ISOVER NF 333 V
290	Original wall construction
5	Waterproof insulation
200	ISOVER XPS
5	Draining backfill layer

DETAIL 4 - Patio door, cellar insulation

Urban Regeneration of a community in Madrid

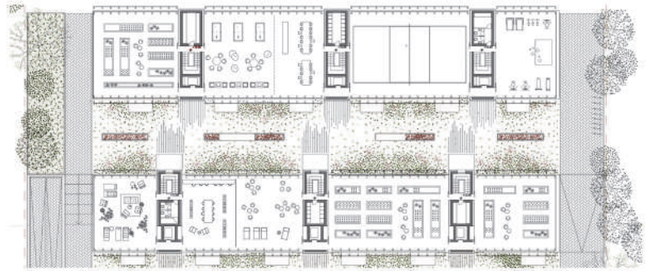
Madrid, Spain

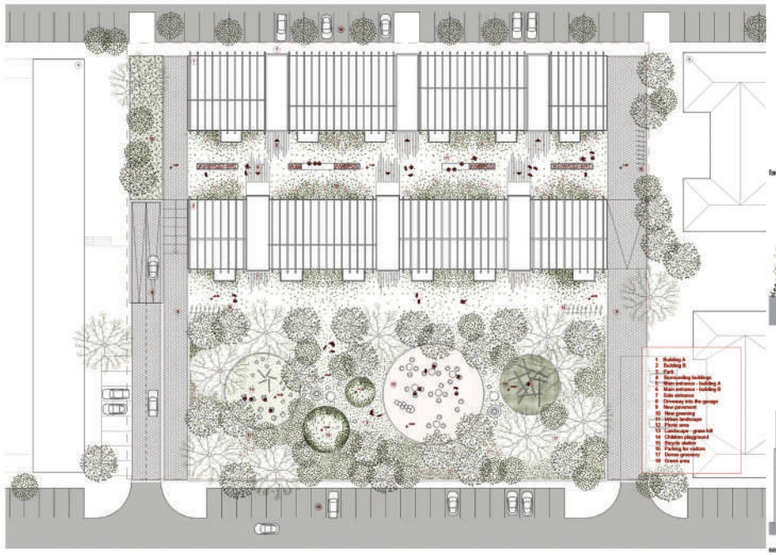
I PRIZE
SLOVENIA
National Stage 2017

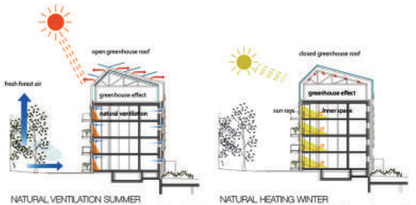
JAN TINUNIN

SABINA TROHA

University of Ljubljana

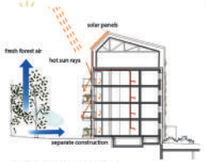






NATURAL VENTILATION SUMMER
Hot air from the inner space passes through the open greenhouse roof. It creates the natural ventilation.

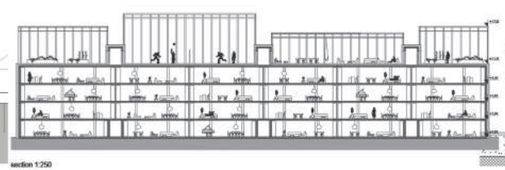
NATURAL HEATING WINTER
Closed openings on the roof of greenhouse, the shaders are not opened, so that the light can enter the space. In living area is the same situation, light enters the living area and heat the inner space.



DOUBLE FACADE SUMMER
Movable panels on the facade (made of white textile) are closed, so that the summer light can't enter the living space (preventing from overheating). On the rooftop are solar panels for sanitary water.

DOUBLE FACADE WINTER
Movable textile panels are opened, so that the winter light enter and heat the inner space. The heat passes through the spaces.

facade detail

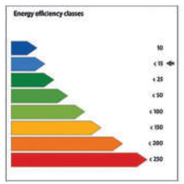


section 1:250

CALCULATIONS

Specific Heat Demand

Transmission Heat Losses	30791.02	kWh/a
Ventilation Heat Losses	52458.44	kWh/a
Total Heat Losses	83249.46	kWh/a
Internal Heat Gains	24326.66	kWh/a
Solar Heat Gains	28966.58	kWh/a
Total Heat Gains	51138.75	kWh/a
Annual Heat Demand:	32110.71	kWh/a
Specific Heat Demand:	10.43	kWh/(m2a)



Ⓓ

6,0	Floor covering
	Screed
	Vapour retarder and separating layer
0,5	Hydroinsulation
18,0	ISOVER Metac FLP 1 Durotec
18,8	ISOVER Metac FLP 1 Durotec
30,0	Reinforced concrete ceiling
1,5	Interior plaster

Ⓒ

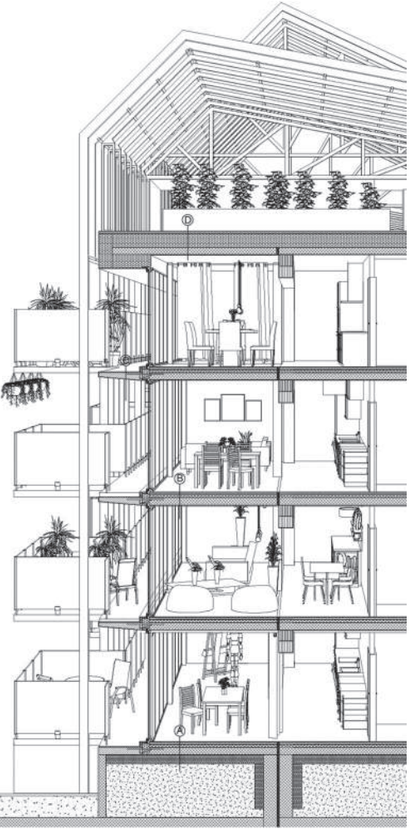
5,0	Floor covering
	Screed
0,5	Hydroinsulation
15,0	Concrete foundation slab

Ⓑ

5,0	Floor covering
	Screed
	Vapour retarder and separating layer
	Sound insulation
5,0	
20,0	Concrete foundation slab

Ⓐ

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



more about the project on **www.isover-students.com**

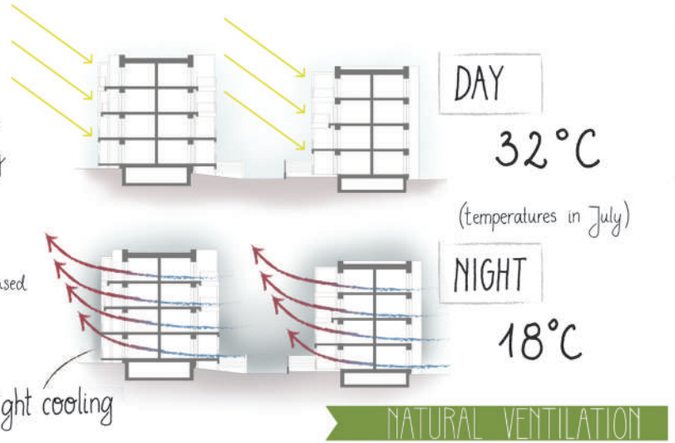
Urban Regeneration of a community in Madrid

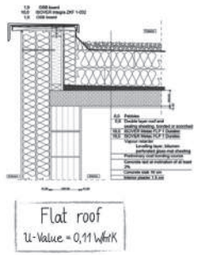
Madrid, Spain

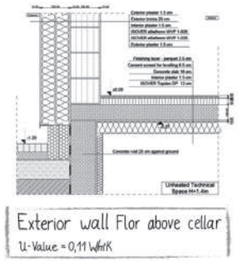
II PRIZE
SLOVENIA
National Stage 2017

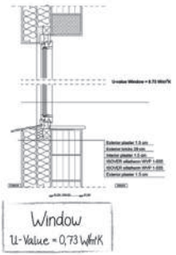
VANJA
CVIJETIĆ

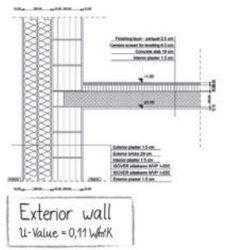
University of Ljubljana











more about the project on **www.isover-students.com**

Urban Regeneration of a community in Madrid

Madrid, Spain

III PRIZE
SLOVENIA
National Stage 2017

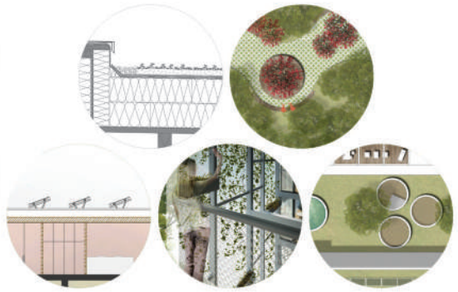
MAŠA ČUK

TINA DOLENC

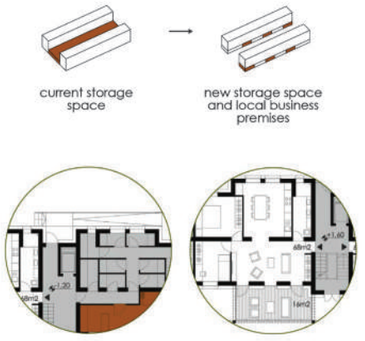
University of Ljubljana

CROSS SECTION

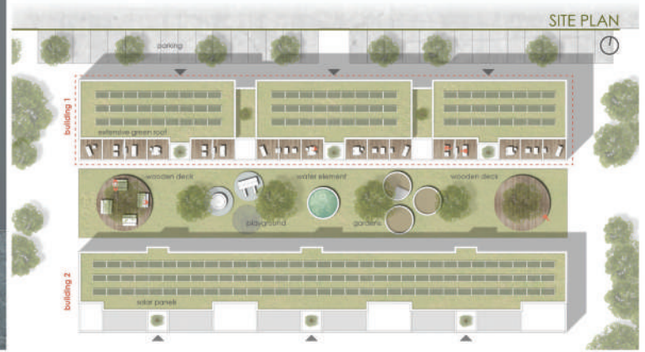
SUSTAINABILITY



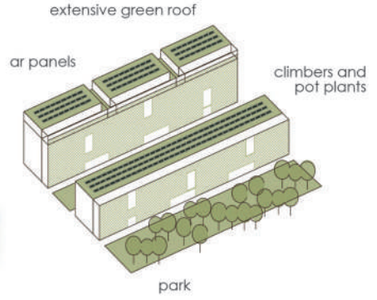
CONCEPT: TRANSFORMATIONS



SITE PLAN



FACADE



more about the project on **www.isover-students.com**

Urban Regeneration of a community in Madrid

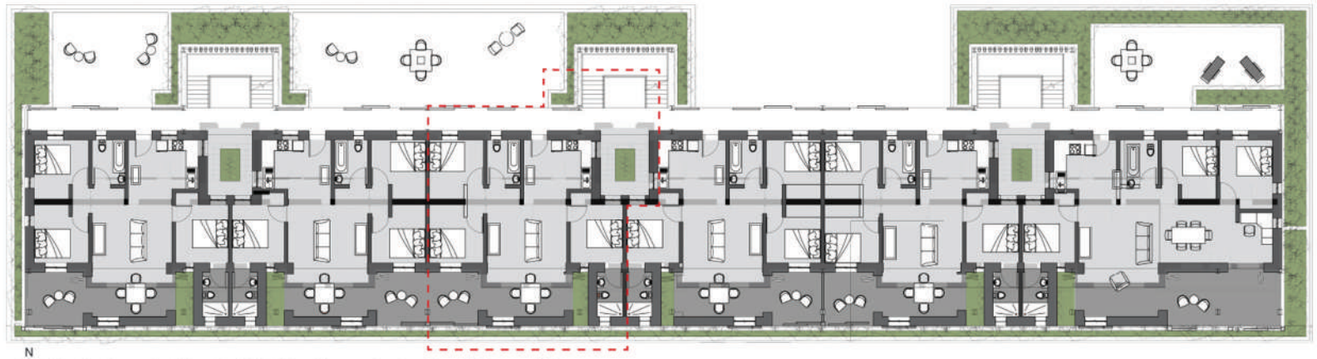
Madrid, Spain

I PRIZE
SOUTH AFRICA
National Stage 2017

JARRED POTGIETER

KYLE WEEDMAN

University of Johannesburg



Building 2 [Park Side], 1st, 2nd, 3rd Floor Plan 1:200

63m2

Building 1,
New 5th Floor Unit

70m2

Building 1,
4th New Floor Unit

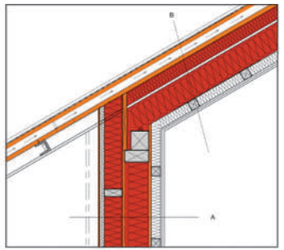
Existing Walls | Existing Walls

New Walls | New Floor
Existing Walls | Existing Walls

93m2

1 2 3

Building 2, 1st, 2nd, 3rd Floor Unit Renovation



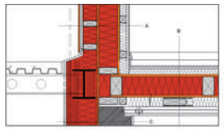
Wood beam with RVF External wall, intermediate ceiling

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 6/16 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
1,0	Exterior cladding (e.g. wood, metal, plastic, stone)

Build-up B in cm

	Floor covering
5,0	Screed
3,0	ISOVER Akustic EP 3 040
4,0	ISOVER Expanit EPS 100/035 as compensation for height of tube
1,9	OSB board or chipboard
16,0	ISOVER Integra ZKF 1-032 (solid wood beams 10/16, e=60cm, 11% wp)
1,5	OSB board or chipboard
5,0	Installation level with ISOVER Akustik TP 1 (glass wool, WLG 040)
3,7	Rigips Ceiling profile CD 60/27 as basic profile
2,7	Rigips Ceiling profile CD 60/27 as supporting profile
2,5	Rigips Rigidur H double layer, each layer 12.5 mm



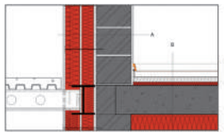
Monopitch roof structure (I-beam) Eaves

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 6/16 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
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 FJI beam 38x58/260, e=60cm, 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



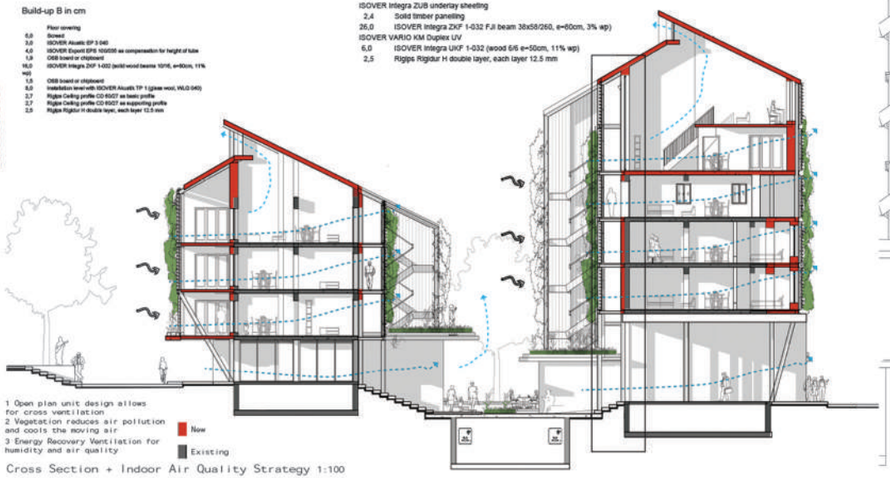
Solid construction with CIS Basement ceiling (unheated basement)

Build-up A in cm

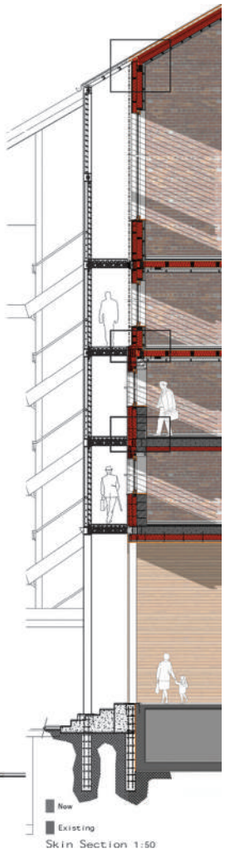
1,5	Interior plaster
24,0	Vertically perforated brick HLzW
14,0	ISOVER Ellaterm WVP 1-055
14,0	ISOVER Ellaterm WVP 1-055
1,5	Thick plaster
25,0	I beam to be insulated with ISOVER specified insulation

Build-up B in cm

	Floor covering
5,0	Screed
	Vapour retarder and separating layer
4,0	ISOVER Expanit EPS 100/035
3,0	ISOVER Akustic EP 1
16,0	Reinforced concrete ceiling
12,0	ISOVER Topdec DP 1-032 ULTIMATE



Cross Section + Indoor Air Quality Strategy 1:100



Skin Section 1:50

Urban Regeneration of a community in Madrid

Madrid, Spain

II PRIZE
SOUTH AFRICA
National Stage 2017

JAMES HOWARD

TARIEN LAUBSCHER

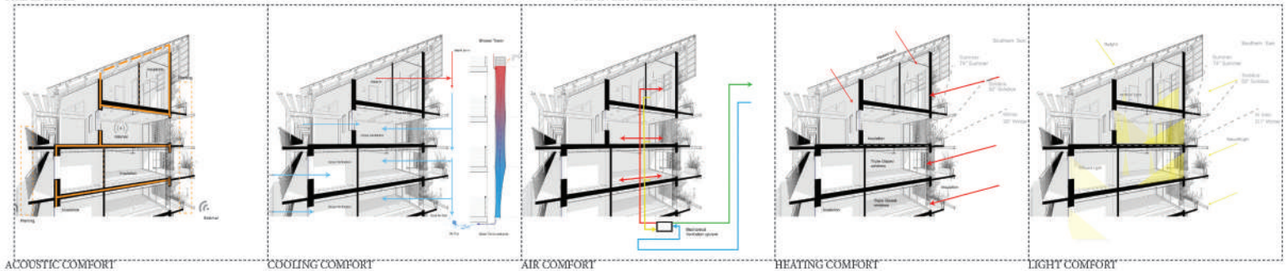
University of Johannesburg

WETLAND

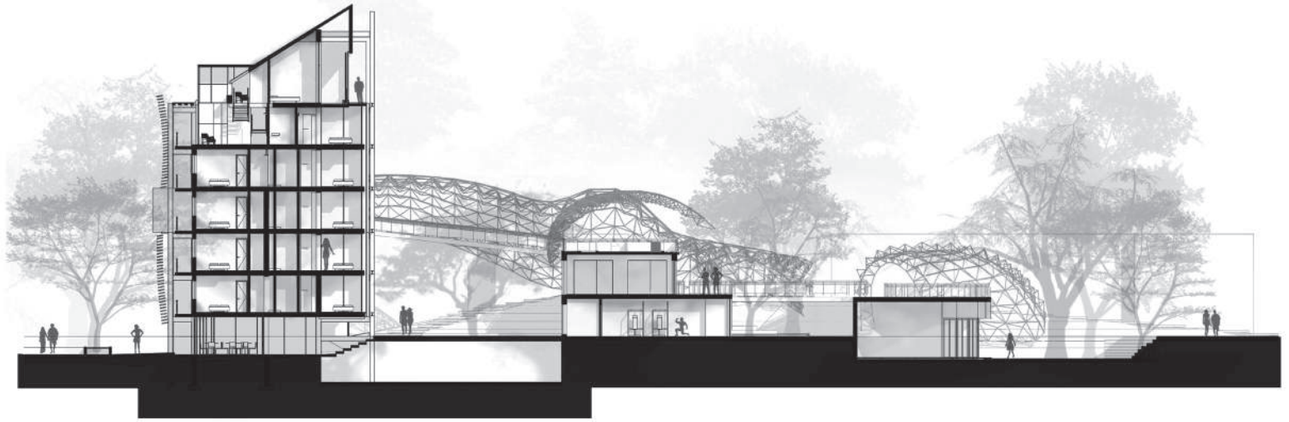
THE IN BETWEEN SPACE

FIRE ESCAPES

THE IN BETWEEN SPACE

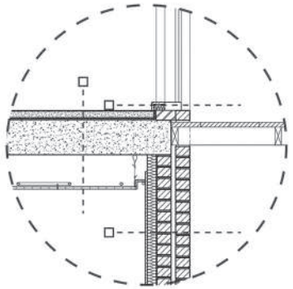


ACOUSTIC COMFORT | COOLING COMFORT | AIR COMFORT | HEATING COMFORT | LIGHT COMFORT



SITE CROSS SECTION

DETAIL 3

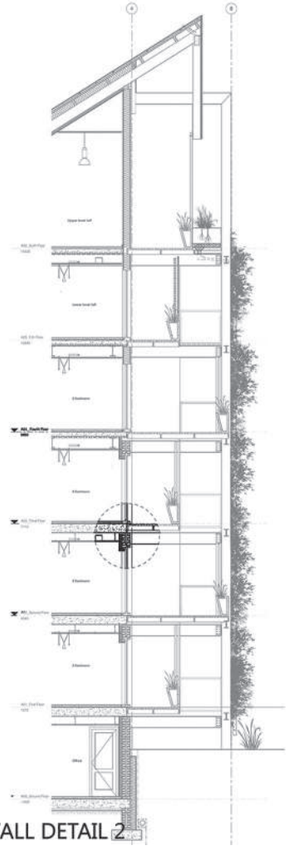


MAKE UP

1.0 FLOOR COVERING
4.0 SCREED
0.0 PE FOIL
1.5 ISOVER INSULATION ARENA PF
18.0 CONCRETE METAL DECK SLAB20.0 CEILING VOID
2.0 SUSPENDED CEILING

1.5 INTERIOR PLASTER
4.0 ISOVER INSULATION ARENA
50.0 ALUMINIUM MULLION
1.5 EXTERIOR RENDERING

1.5 THICK PLASTER
7.0 ISOVER SILLATHERM WVP 1-035
11.5 CERAMIC PERFORATED BRICK
5.0 CAVITY
11.5 CERAMIC PERFORATED BRICK
1.5 THICK PLASTER



FLOOR TO WALL DETAIL 2

more about the project on **www.isover-students.com**

Urban Regeneration of a community in Madrid

Madrid, Spain

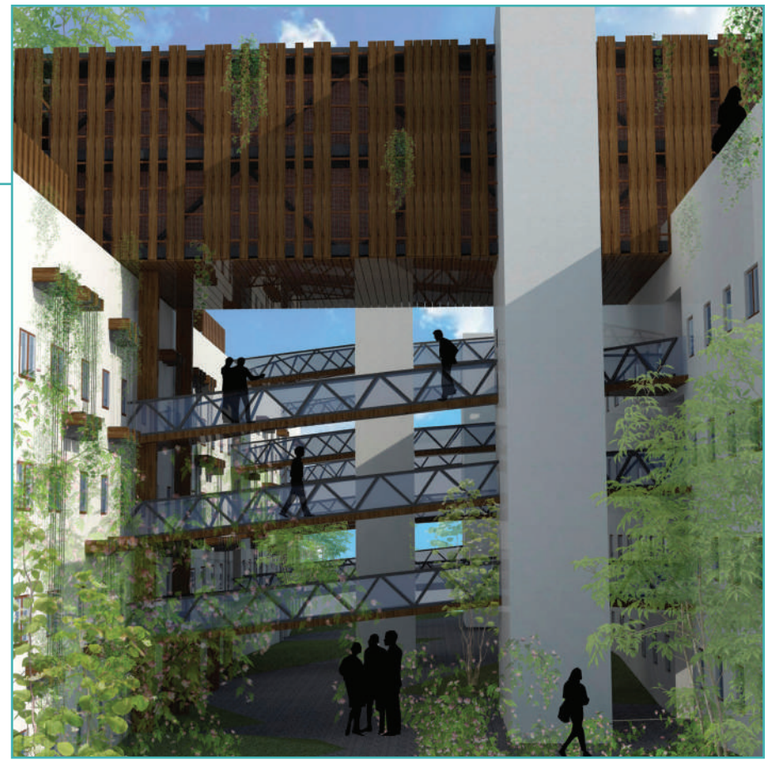
I PRIZE
SPAIN
National Stage 2017

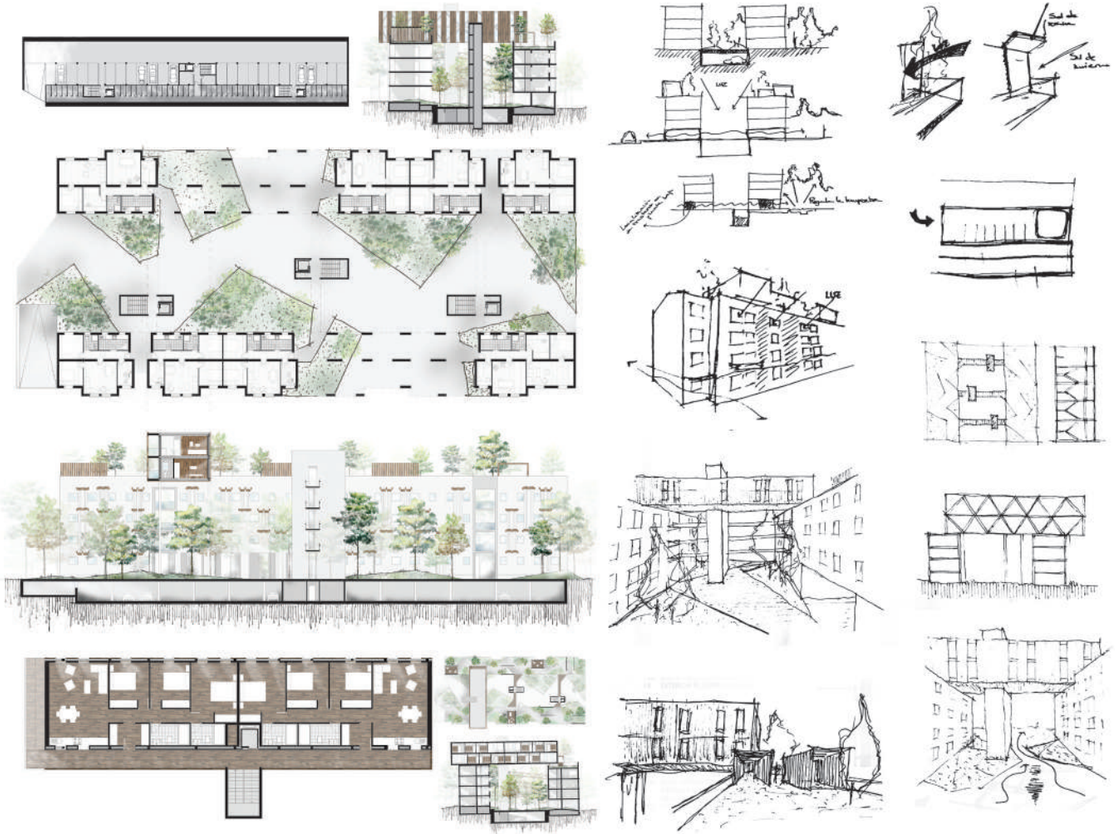
ALEJANDRA GOMEZ

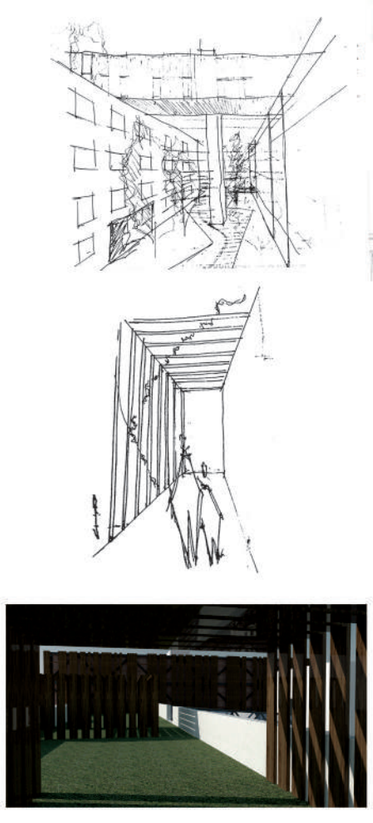
LUCIA GOMEZ

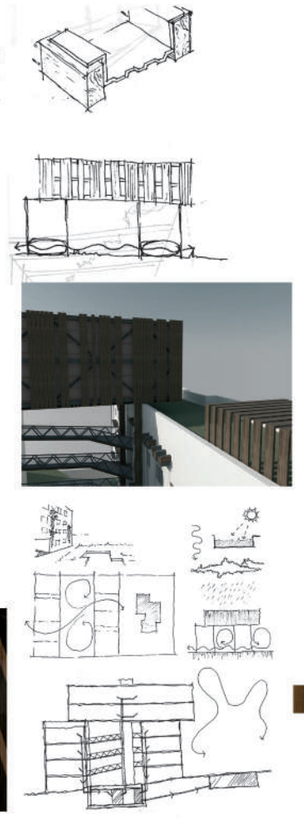
ANA LOPEZ

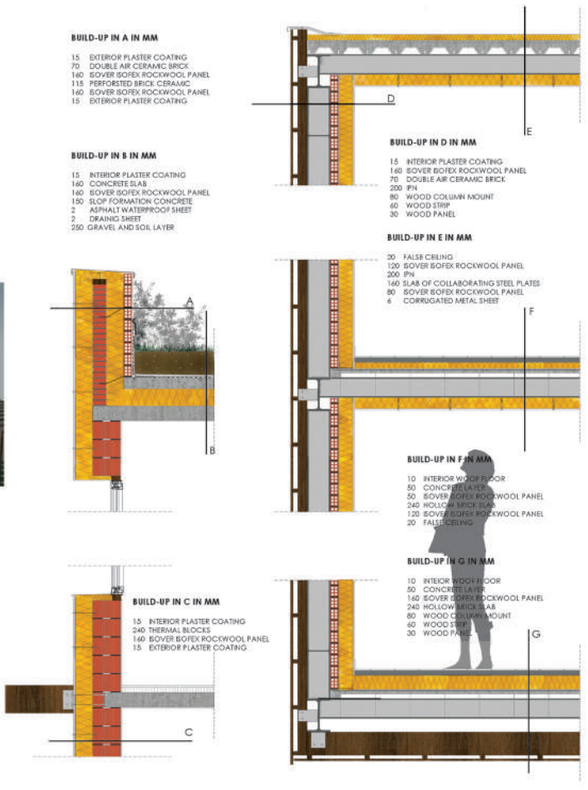
Universidad de Valladolid










BUILD-UP IN A IN MM
15 EXTERIOR PLASTER COATING
70 DOUBLE AIR CERAMIC BRICK
160 ISOVER ISOFEX ROCKWOOL PANEL
115 PERFORSTED BRICK CERAMIC
160 ISOVER ISOFEX ROCKWOOL PANEL
15 EXTERIOR PLASTER COATING
BUILD-UP IN B IN MM
15 INTERIOR PLASTER COATING
160 CONCRETE SLAB
160 ISOVER ISOFEX ROCKWOOL PANEL
150 SLOP FORMATION CONCRETE
2 ASPHALT WATERPROOF SHEET
2 DRAINIG SHEET
250 GRAVEL AND SOIL LAYER
A
B
BUILD-UP IN C IN MM
15 INTERIOR PLASTER COATING
240 THERMAL BLOCKS
160 ISOVER ISOFEX ROCCWOOL PANEL
15 EXTERIOR PLASTER COATING
C
D
E
BUILD-UP IN D IN MM
15 INTERIOR PLASTER COATING
160 ISOVER ISOFEX ROCKWOOL PANEL
70 DOUBLE AIR CERAMIC BRICK
200 IPH
80 WOOD COLUMN MOUNT
60 WOOD STRIP
30 WOOD PANEL
BUILD-UP IN E IN MM
20 FALSE CEILING
120 ISOVER ISOFEX ROCKWOOL PANEL
200 IPH
160 SLAB OF COLLABORATING STEEL PLATES
80 ISOVER ISOFEX ROCKWOOL PANEL
6 CORRUGATED METAL SHEET
F
BUILD-UP IN F IN MM
10 INTERIOR WOOD FLOOR
50 CONCRETE LAYER
50 ISOVER ISOFEX ROCKWOOL PANEL
240 HOLLOW BRICK SLAB
120 ISOVER ISOFEX ROCKWOOL PANEL
20 FALSE CEILING
BUILD-UP IN G IN MM
10 INTERIOR WOOD FLOOR
50 CONCRETE LAYER
160 ISOVER ISOFEX ROCKWOOL PANEL
240 HOLLOW BRICK SLAB
80 WOOD COLUMN MOUNT
60 WOOD STRIP
30 WOOD PANEL
G

Urban Regeneration of a community in Madrid

Madrid, Spain

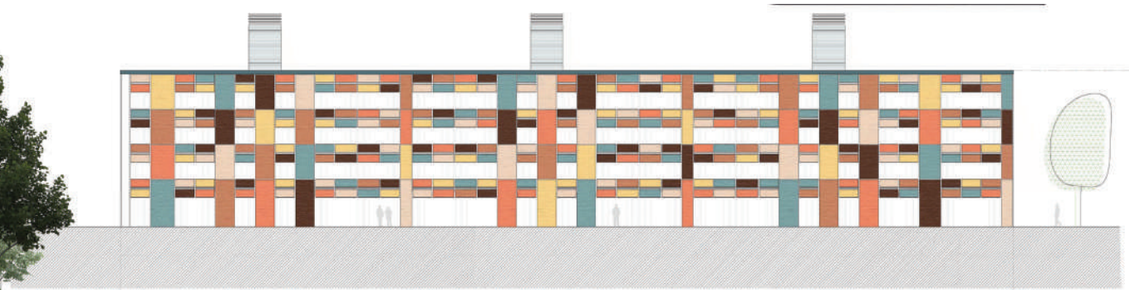
II PRIZE
SPAIN
National Stage 2017

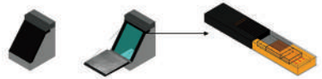
MARINA PINA

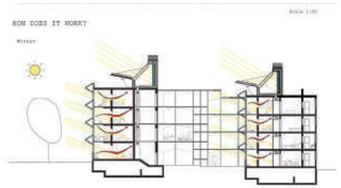
MIREIA MAGRANS

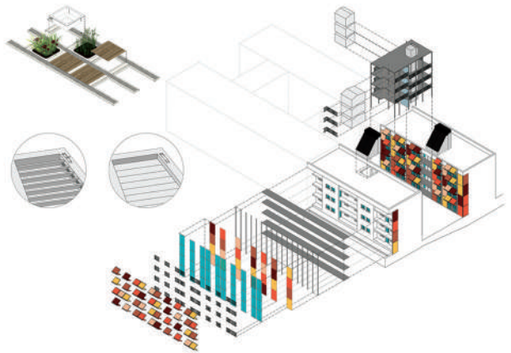
MARTA TRILLO

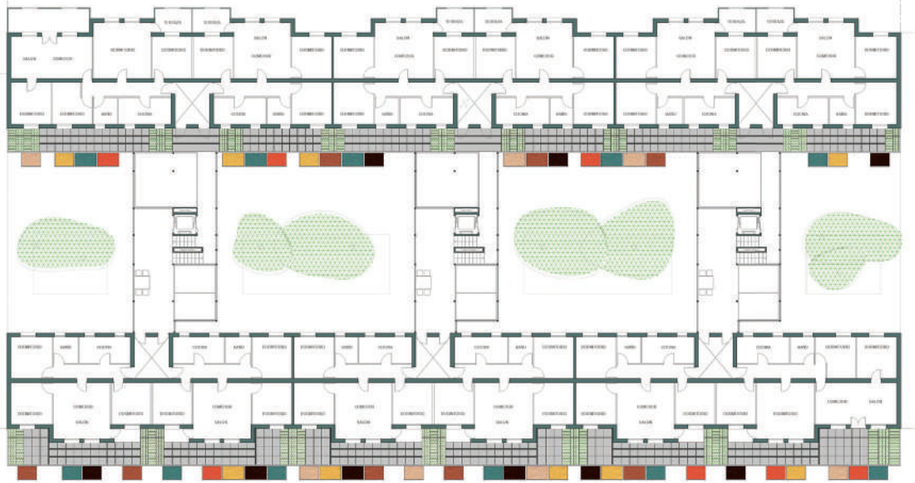
Barcelona School of Architecture

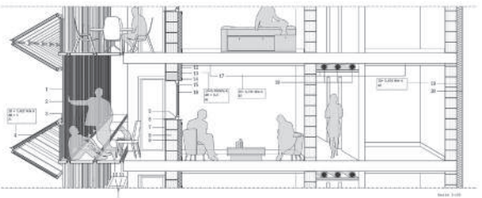


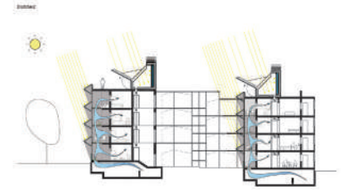


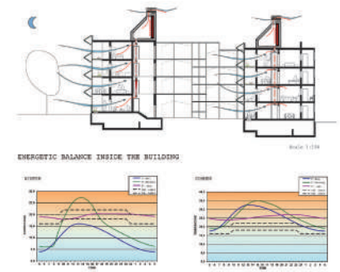












more about the project on **www.isover-students.com**

Urban Regeneration of a community in Madrid

Madrid, Spain

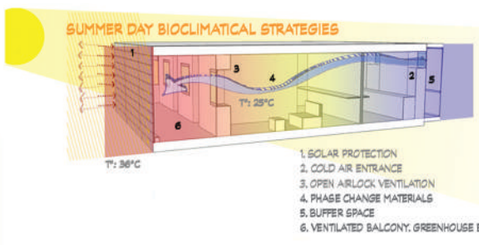
II PRIZE
SPAIN
National Stage 2017

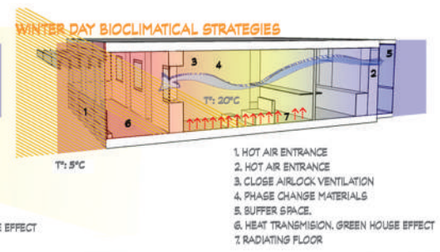
LETICIA DUQUE

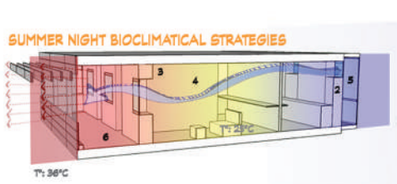
JUAN PABLO HERNÁNDEZ

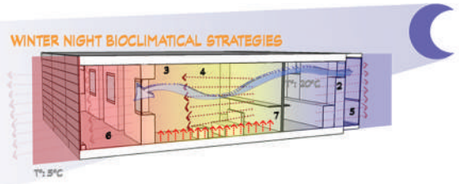
HÉCTOR PÉREZ

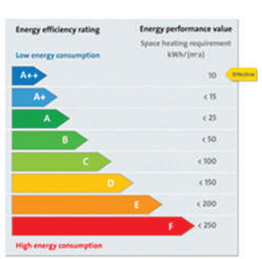
Architecture School of Las Palmas de Gran Canaria University

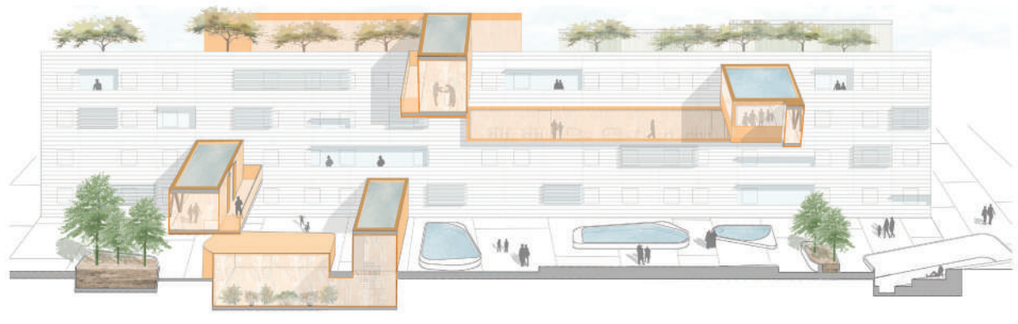

SUMMER DAY BIOCLIMATICAL STRATEGIES
T°: 25°C
T°: 36°C
1. SOLAR PROTECTION
2. COLD AIR ENTRANCE
3. OPEN AIRLOCK VENTILATION
4. PHASE CHANGE MATERIALS
5. BUFFER SPACE
6. VENTILATED BALCONY. GREENHOUSE EFFECT

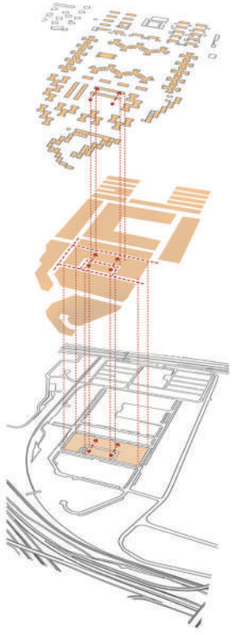

WINTER DAY BIOCLIMATICAL STRATEGIES
T°: 20°C
T°: 5°C
1. HOT AIR ENTRANCE
2. HOT AIR ENTRANCE
3. CLOSE AIRLOCK VENTILATION
4. PHASE CHANGE MATERIALS
5. BUFFER SPACE.
6. HEAT TRANSMISION. GREEN HOUSE EFFECT
7. RADIATING FLOOR

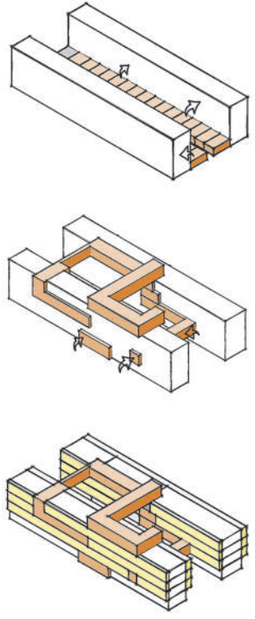

SUMMER NIGHT BIOCLIMATICAL STRATEGIES
T°: 36°C

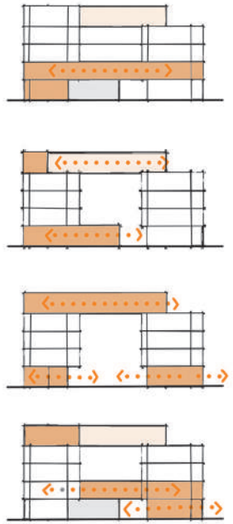

WINTER NIGHT BIOCLIMATICAL STRATEGIES
T°: 20°C
T°: 5°C

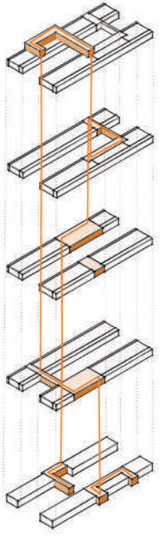

EFFICIENCY VALUES
Energy efficiency rating
Energy performance value
Space heating requirement
kWh/(m²a)
Low energy consumption
A++
A+
A
B
C
D
E
F
< 15
< 25
< 50
< 100
< 150
< 200
< 250
High energy consumption











Urban Regeneration of a community in Madrid

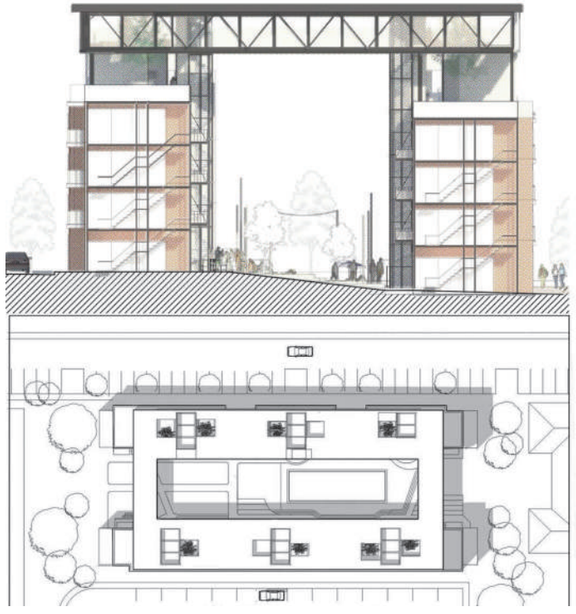
Madrid, Spain

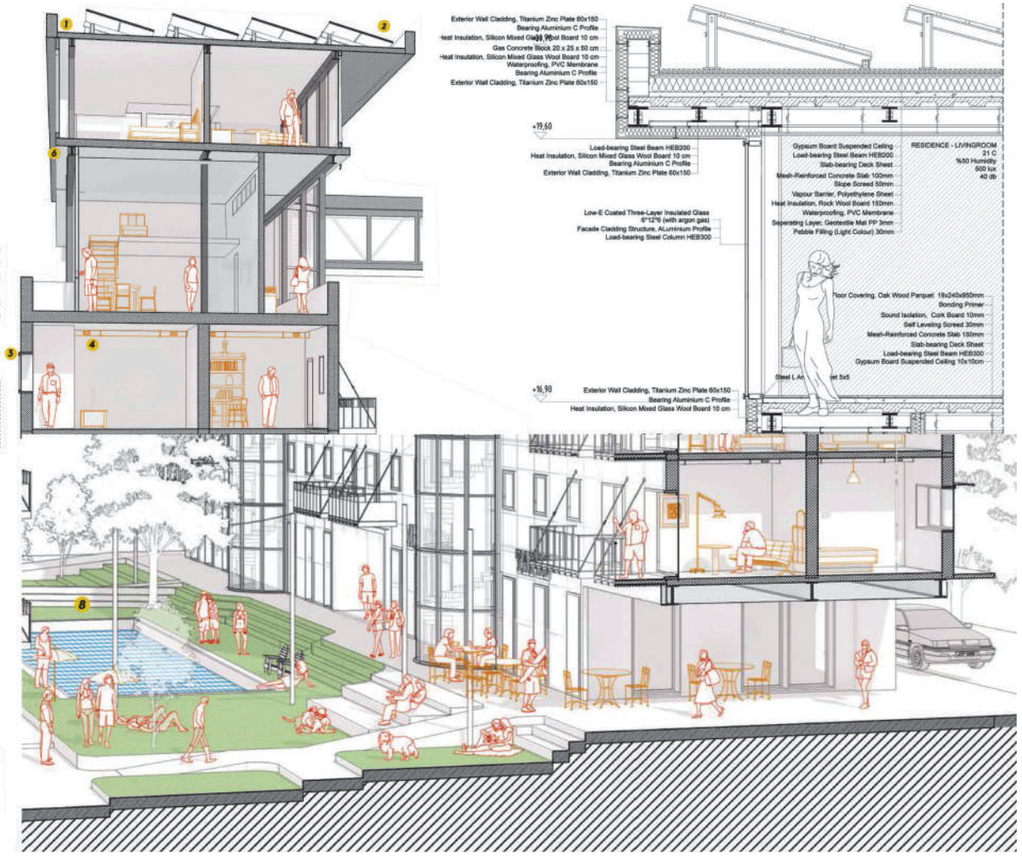
I PRIZE
TURKEY
National Stage 2017

OZAN SEN

ZEYNEP KUHEYLAN

Istanbul Technical University





more about the project on **www.isover-students.com**

Urban Regeneration of a community in Madrid

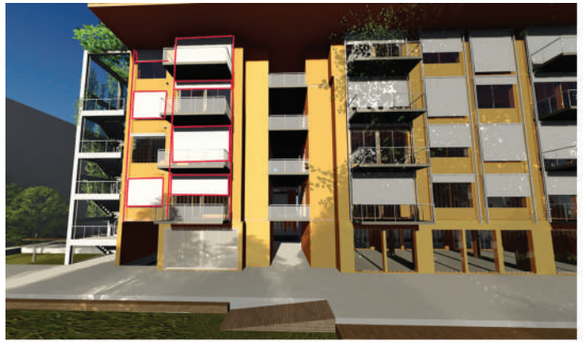
Madrid, Spain

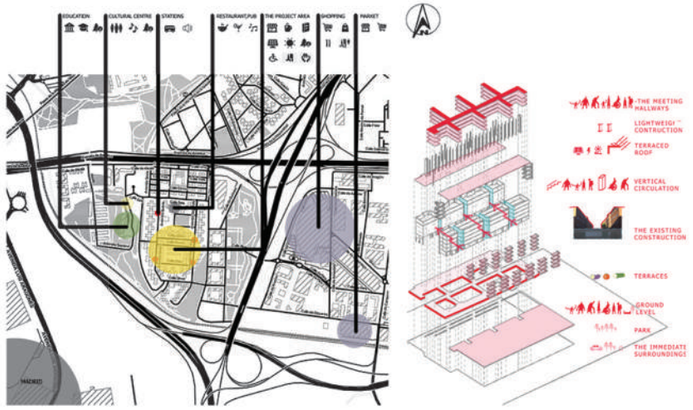
II PRIZE
TURKEY
National Stage 2017

FEYZA AINAR

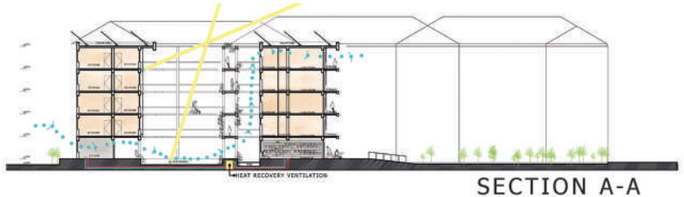
SIDIKA YNDER

Gazi University

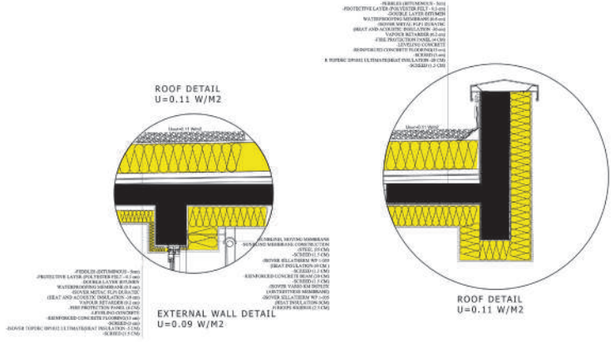


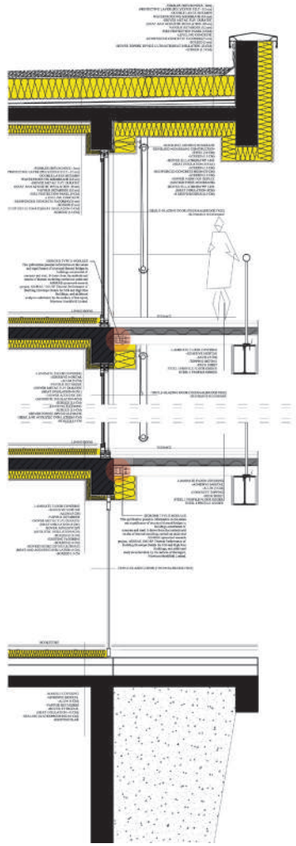


FIRST LEVEL



SECTION A-A





III PRIZE
TURKEY
National Stage 2017

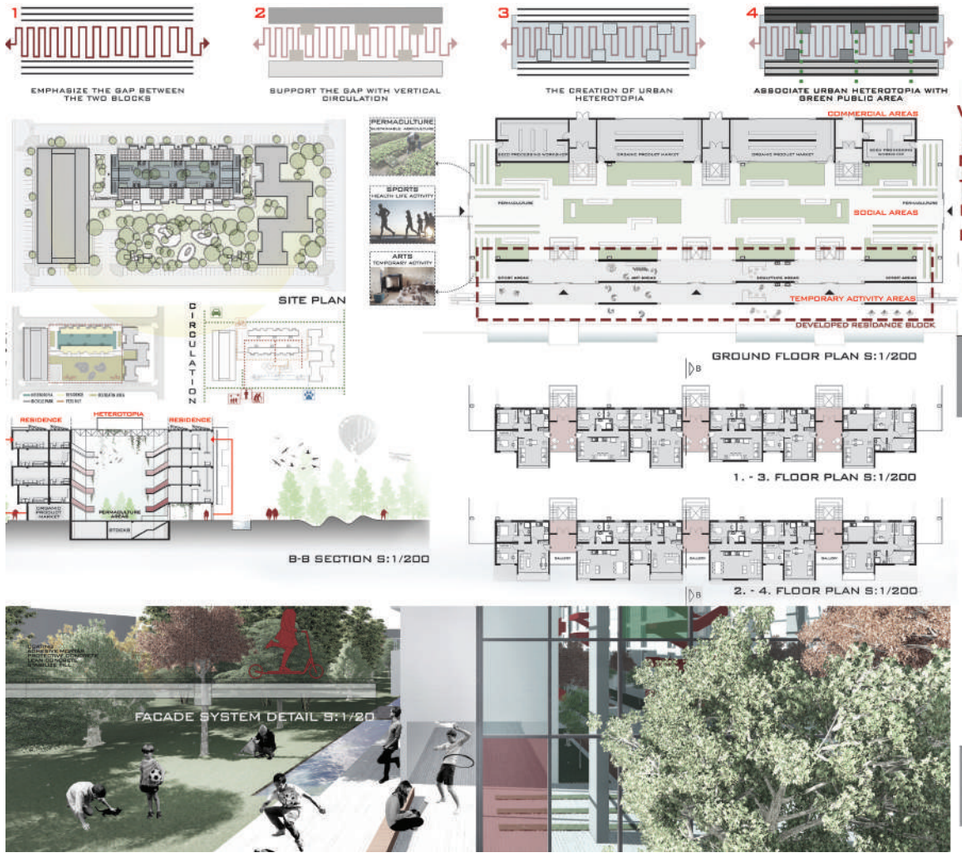
ALI GOKASLAN

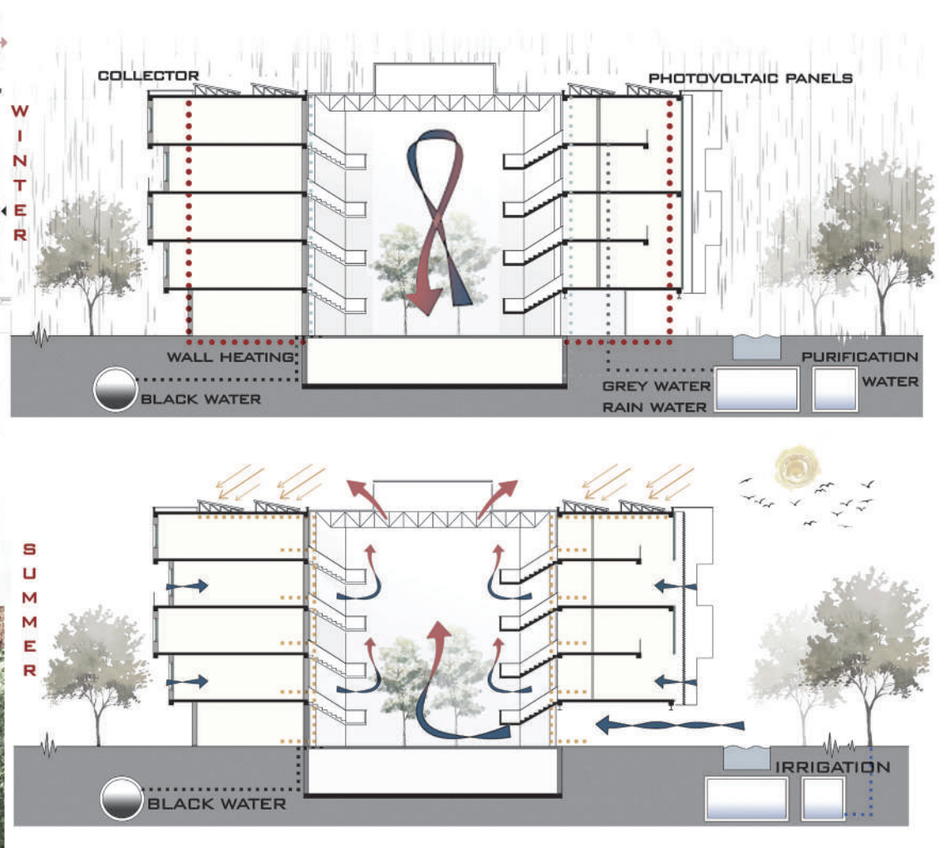
MUAMMER YAMAN

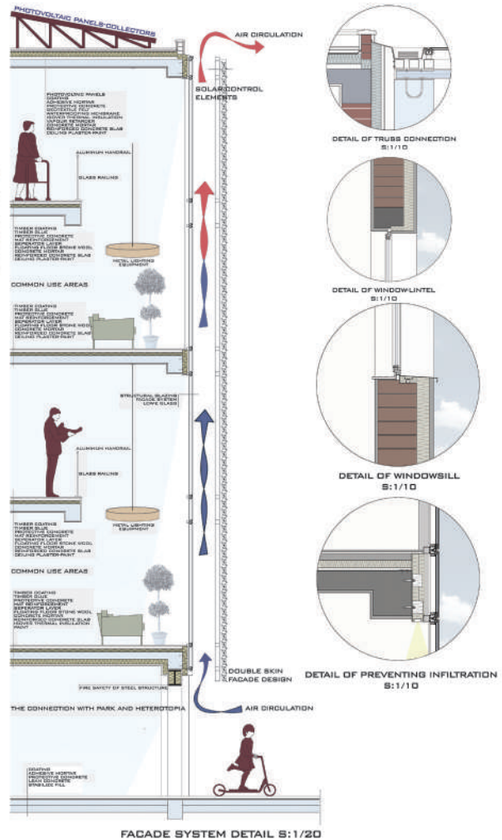
Ondokuz Mayis University

Urban Regeneration of a community in Madrid

Madrid, Spain


1
EMPHASIZE THE GAP BETWEEN THE TWO BLOCKS
2
SUPPORT THE GAP WITH VERTICAL CIRCULATION
3
THE CREATION OF URBAN HETEROTOPIA
4
ASSOCIATE URBAN HETEROTOPIA WITH GREEN PUBLIC AREA
SITE PLAN
CIRCULATION
PERMACULTURE
SPORTS
ARTS
COMMERCIAL AREAS
SOCIAL AREAS
TEMPORARY ACTIVITY AREAS
DEVELOPED RESIDANCE BLOCK
GROUND FLOOR PLAN S:1/200
RESIDENCE
HETEROTOPIA
RESIDENCE
B-B SECTION S:1/200
1. - 3. FLOOR PLAN S:1/200
2. - 4. FLOOR PLAN S:1/200
FACADE SYSTEM DETAIL S:1/20


WINTER
COLLECTOR
PHOTOVOLTAIC PANELS
WALL HEATING
BLACK WATER
PURIFICATION
GREY WATER
RAIN WATER
WATER
SUMMER
BLACK WATER
IRRIGATION


PHOTOVOLTAIC PANELS COLLECTORS
AIR CIRCULATION
SOLAR CONTROL ELEMENTS
COMMON USE AREAS
COMMON USE AREAS
DOUBLE SKIN FACADE DESIGN
AIR CIRCULATION
THE CONNECTION WITH PARK AND HETEROTOPIA
FACADE SYSTEM DETAIL S:1/20
DETAIL OF TRUSS CONNECTION S:1/10
DETAIL OF WINDOWLINTEL S:1/10
DETAIL OF WINDOWSILL S:1/10
DETAIL OF PREVENTING INFILTRATION S:1/10

Urban Regeneration of a community in Madrid

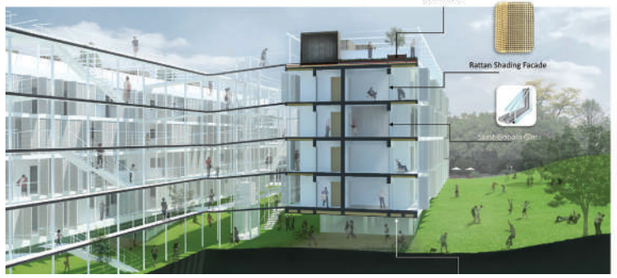
Madrid, Spain

I PRIZE
UK
National Stage 2017

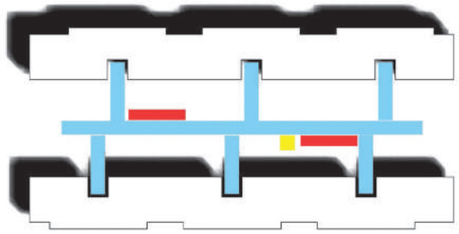
DONGQI PIAO

FEIHONG XUE

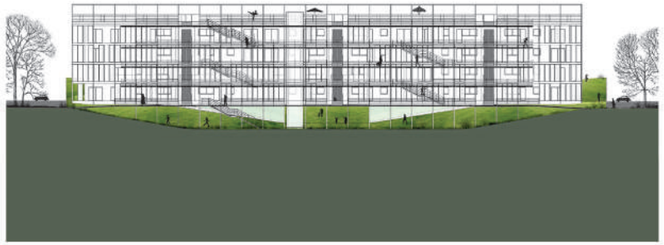
The University of Nottingham

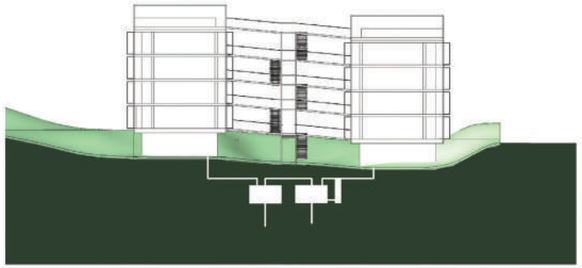


Geothermal

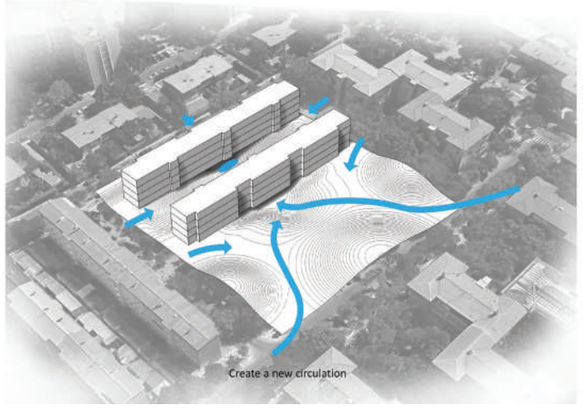


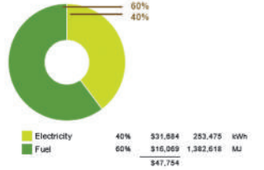
Build two stairs and one lift instead of six stairs and two lifts





Covering 95% heating Only needn26% of the original heating source

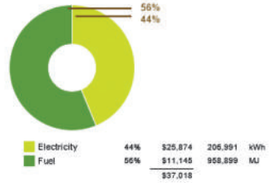




Saving
$10,736

22.5%

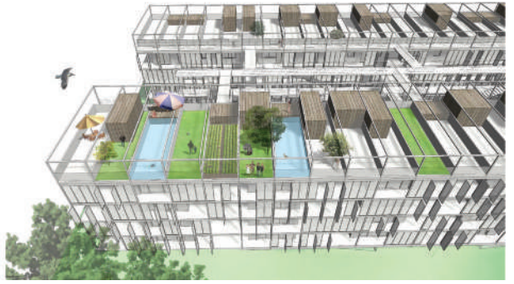
Fuel Consumption



Reducing
21 tons CO2/year

Fuel Consumption

Divide each roof into 24 pieces for each owner.
And residents decide how these roof spaces are used.



Urban Regeneration of a community in Madrid

Madrid, Spain

II PRIZE
UK
National Stage 2017

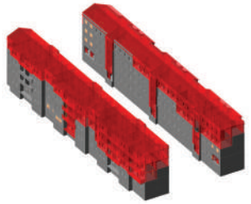
SANDRA PETKUTE

STEFAN DOOKEERAM

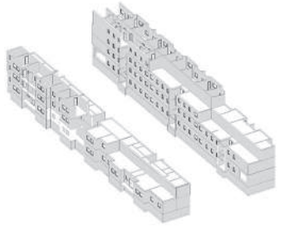
The University of Nottingham

REFURBISHEMENT STRATEGY

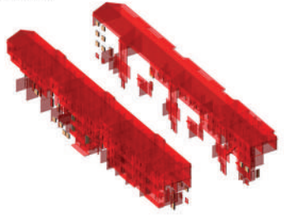
Existing situation buildings are analysed to evaluate load-bearing structure
potential for refurbishment and extra load



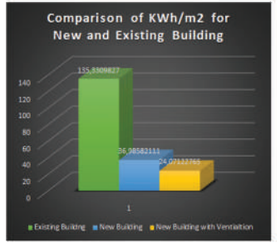
Highlighted parts for potential demolition for design optimisation



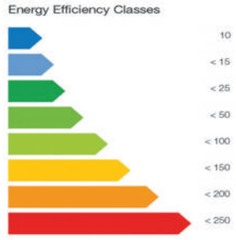
Loadbearing walls are planned to use to support new lightweight MODULAR structures

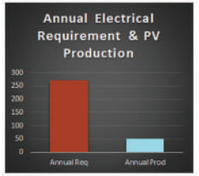


New roof of the buildings guarantee dramatically improved energy loss results

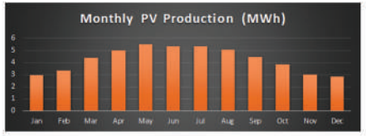


- PV – **20%** of annual electricity
- Solar Thermal – **100% of hot water** for 8 months
- Natural Ventilation
- **ERV** in combination with **GSHP** for indoor air quality.





- Grid Connected for back up and exporting.
- Reduction in CO2 Emission.
- 240m2 throughout the roof and facades.
- 20% of annual electrical demand supplied via PV.

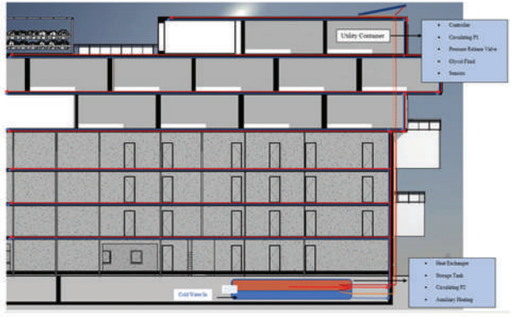


PV Schematic

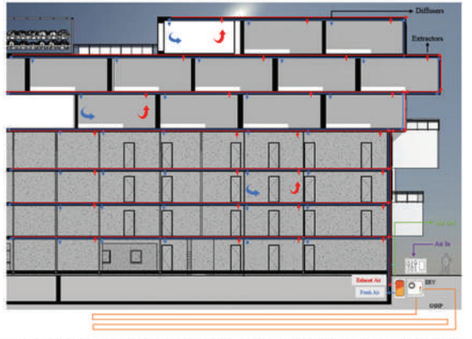
Lightweight module structures are completed in factory and assembled on site.
It allows to use the least amount of time for construction period (80/20% concept)

ENERGY ANALYSIS

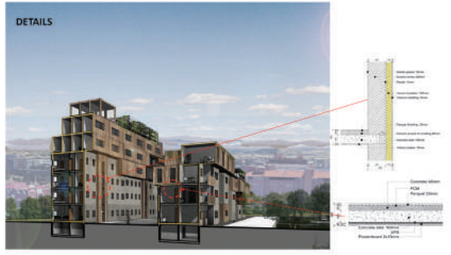
SOLAR THERMAL & GSHP



Tanks located in the basement SW and NE blocks



Exhaust air energy is captured and used to treat incoming air



Urban Regeneration of a community in Madrid

Madrid, Spain

III PRIZE
UK
National Stage 2017

GALIH TINGAL

AHMED ALAMIN

The University of Nottingham

01 Existing Building

Lack of accesibilities for elder people and people with the special needs.

02 The Giant Ramp

The existing park are now proposed as the giant ramp and also can be used as the amphitheater. Thus now everyone can access the park without any difficulties

03 Social Spaces

The initial building does not have any proper social spaces. An addition of some bridges and corridors proposed to encourage the inhabitants to have "a dialogue" amongst each other

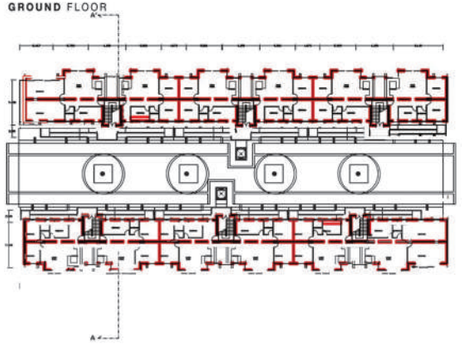
04 Balconies

An addition of balconies can gives the inhabitants extra space while it works also as second skin

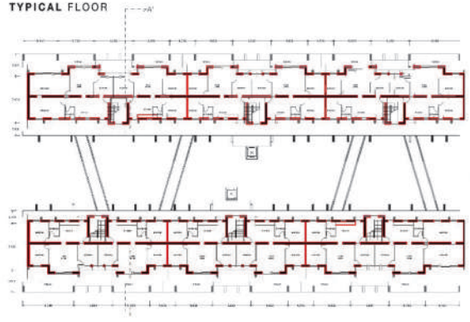
05 Adding More Spaces

More social space proposed to be a trigger for inhabitants to be connected not also amongst the another tenants, but also with the neighborhood. On the other hand, those social spaces also has a role as the food producing area

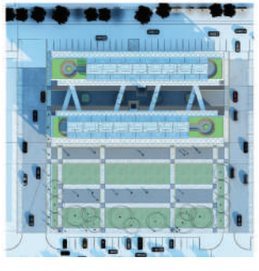
GROUND FLOOR



TYPICAL FLOOR



- Existing Structure
- Insulated Wall
- New Structure

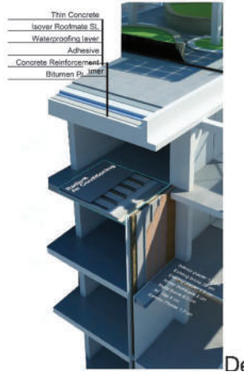


FOOD PRODUCTION AREA

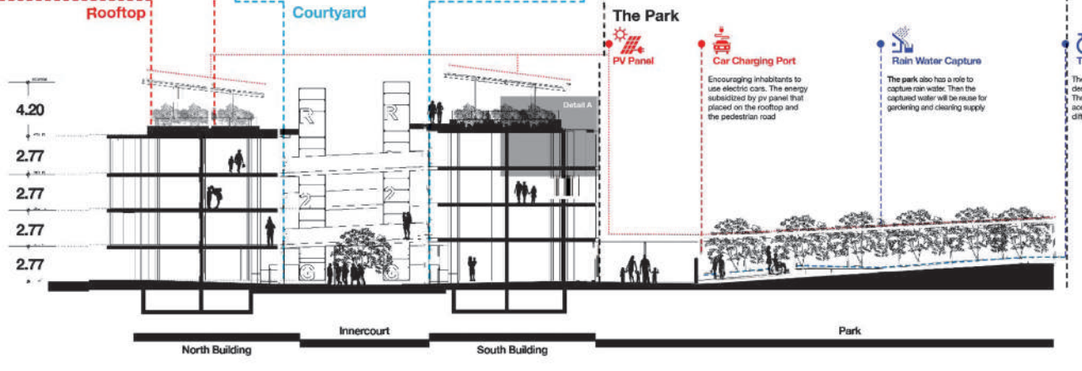
List of plants
Vegetable, Tomato, Cucumber, Chilli, Eggplant, Green peas, Cabbage, Carrot, Coriander, Strawberry

COURTYARD

PARK



Detail **A**



I PRIZE
UKRAINE
National Stage 2017

ALINA HOLOVATIUK

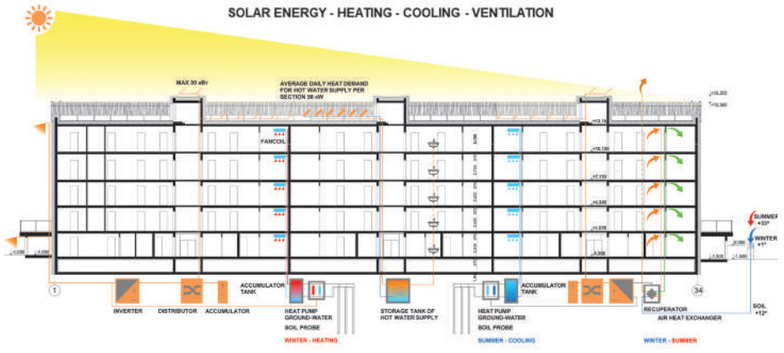
KNUCA

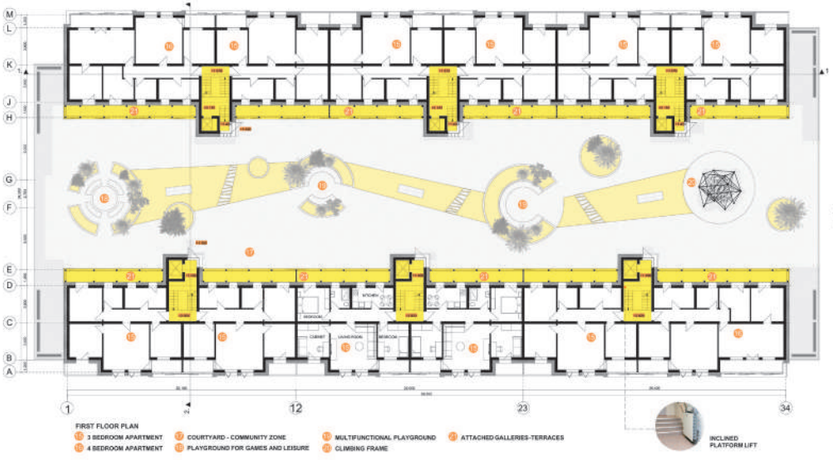
Urban Regeneration of a community in Madrid

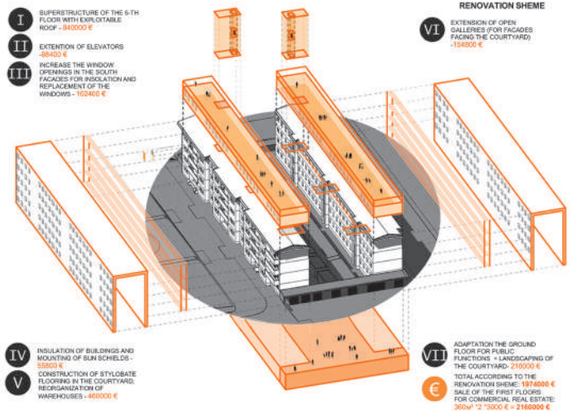
Madrid, Spain

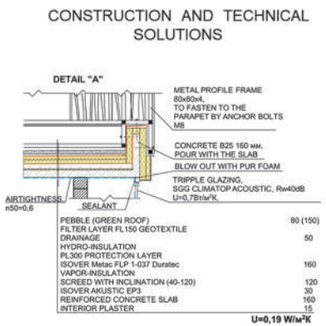
II PRIZE

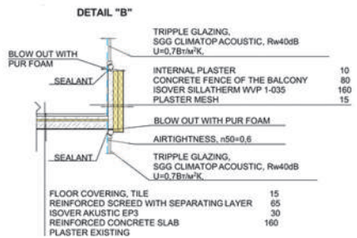
MULTI**COMFORT** House Students Contest International stage, Madrid 2017

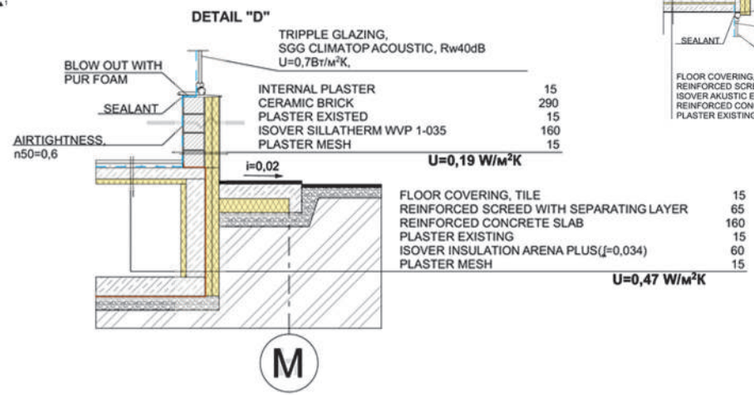

SOLAR ENERGY - HEATING - COOLING - VENTILATION
MAX 30 dB+
AVERAGE DAILY HEAT DEMAND FOR HOT WATER SUPPLY PER SECTION 38 кW
FANCOIL
INVERTER
DISTRIBUTOR
ACCUMULATOR
ACCUMULATOR TANK
HEAT PUMP GROUND-WATER
SOIL PROBE
WINTER - HEATING
STORAGE TANK OF HOT WATER SUPPLY
ACCUMULATOR TANK
HEAT PUMP GROUND-WATER
SOIL PROBE
SUMMER - COOLING
RECUPERATOR
AIR HEAT EXCHANGER
WINTER - SUMMER
SUMMER +10°
WINTER +1°
SOIL +12°


FIRST FLOOR PLAN
3 BEDROOM APARTMENT
4 BEDROOM APARTMENT
COURTYARD - COMMUNITY ZONE
PLAYGROUND FOR GAMES AND LEISURE
MULTIFUNCTIONAL PLAYGROUND
CLIMBING FRAME
ATTACHED GALLERIES-TERRACES
INCLINED PLATFORM LIFT


RENOVATION SHEME
I SUPERSTRUCTURE OF THE 5-TH FLOOR WITH EXPLOITABLE ROOF - 840000 €
II EXTENTION OF ELEVATORS -98400 €
III INCREASE THE WINDOW OPENINGS IN THE SOUTH FACADES FOR INSULATION AND REPLACEMENT OF THE WINDOWS - 102400 €
IV INSULATION OF BUILDINGS AND MOUNTING OF SUN SCHIELDS - 55920 €
V CONSTRUCTION OF STYLOBATE FLOORING IN THE COURTYARD; REORGANIZATION OF WAREHOUSES - 460000 €
VI EXTENSION OF OPEN GALLERIES (FOR FACADES FACING THE COURTYARD) -154000 €
VII ADAPTATION THE GROUND FLOOR FOR PUBLIC FUNCTIONS + LANDSCAPING OF THE COURTYARD- 216000 €
TOTAL ACCORDING TO THE RENOVATION SHEME: 1974000 €
SALE OF THE FIRST FLOORS FOR COMMERCIAL REAL ESTATE:
300м² * 2 *3000 € = 2160000 €


CONSTRUCTION AND TECHNICAL SOLUTIONS
DETAIL "A"
METAL PROFILE FRAME 80x80x4, TO FASTEN TO THE PARAPET BY ANCHOR BOLTS M8
CONCRETE B25 160 мм, POUR WITH THE SLAB
BLOW OUT WITH PUR FOAM
TRIPPLE GLAZING, SGG CLIMATOP ACOUSTIC, Rw40dB U=0,7Вт/м²К,
AIRTIGHTNESS n50=0,6
SEALANT
PEBBLE (GREEN ROOF) 80 (150)
FILTER LAYER FL150 GEOTEXTILE
DRAINAGE 50
HYDRO-INSULATION
PL300 PROTECTION LAYER
ISOVER Metac FLP 1-037 Duratec 160
VAPOR-INSULATION
SCREED WITH INCLINATION (40-120) 120
ISOVER AKUSTIC EP3 30
REINFORCED CONCRETE SLAB 160
INTERIOR PLASTER 15
U=0,19 W/м²К


DETAIL "B"
TRIPPLE GLAZING, SGG CLIMATOP ACOUSTIC, Rw40dB U=0,7Вт/м²К,
BLOW OUT WITH PUR FOAM
SEALANT
INTERNAL PLASTER 10
CONCRETE FENCE OF THE BALCONY 80
ISOVER SILLATHERM WVP 1-035 160
PLASTER MESH 15
BLOW OUT WITH PUR FOAM
AIRTIGHTNESS, n50=0,6
SEALANT
TRIPPLE GLAZING, SGG CLIMATOP ACOUSTIC, Rw40dB U=0,7Вт/м²К,
FLOOR COVERING, TILE 15
REINFORCED SCREED WITH SEPARATING LAYER 65
ISOVER AKUSTIC EP3 30
REINFORCED CONCRETE SLAB 160
PLASTER EXISTING


DETAIL "D"
TRIPPLE GLAZING, SGG CLIMATOP ACOUSTIC, Rw40dB U=0,7Вт/м²К,
BLOW OUT WITH PUR FOAM
SEALANT
AIRTIGHTNESS, n50=0,6
INTERNAL PLASTER 15
CERAMIC BRICK 290
PLASTER EXISTED 15
ISOVER SILLATHERM WVP 1-035 160
PLASTER MESH 15
U=0,19 W/м²К
i=0,02
FLOOR COVERING, TILE 15
REINFORCED SCREED WITH SEPARATING LAYER 65
REINFORCED CONCRETE SLAB 160
PLASTER EXISTING 15
ISOVER INSULATION ARENA PLUS(ƛ=0,034) 60
PLASTER MESH 15
U=0,47 W/м²К
M


Energy efficiency classes
10
< 15
< 25
< 50
< 100
< 150
< 200
< 250

Urban Regeneration of a community in Madrid

Madrid, Spain

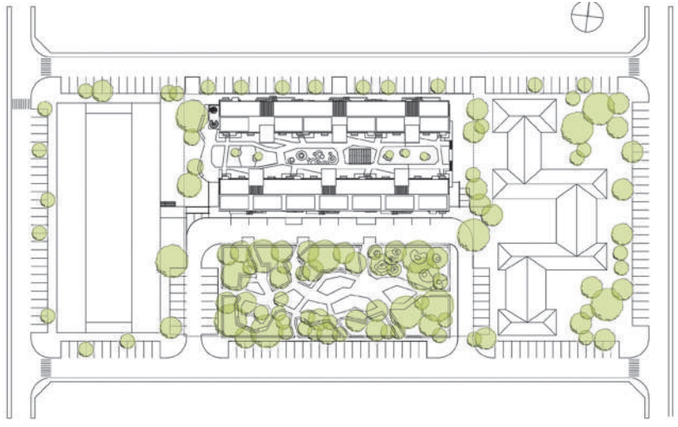
II PRIZE
UKRAINE
National Stage 2017

OKSANA BONCHYK

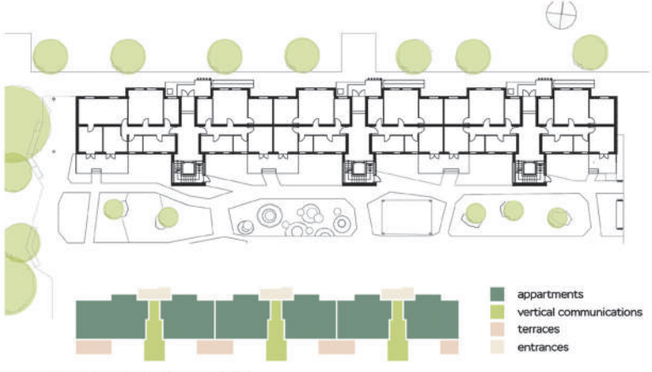
SOLOMIIA HALAYKO

VITALIIA PAVLYSHYN

Lviv Polytechnic National University

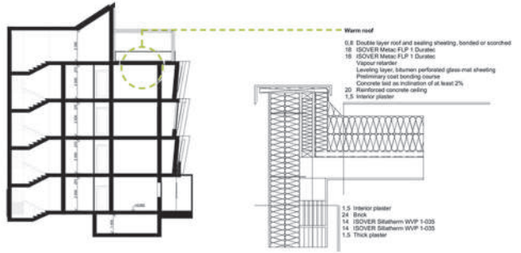


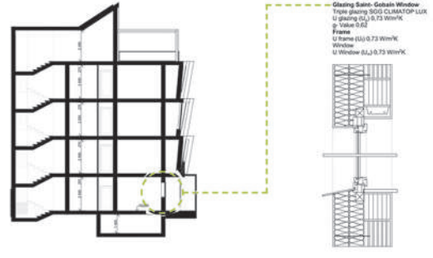
MASTERPLAN M 1:500



GROUND FLOOR PLAN M 1:200

FACADE M 1:200





more about the project on **www.isover-students.com**

Urban Regeneration of a community in Madrid

Madrid, Spain

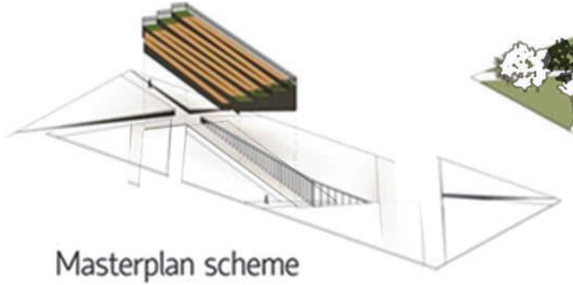
III PRIZE
UKRAINE
National Stage 2017

SHTENDERA ANDRY

BALKO DYMITRO

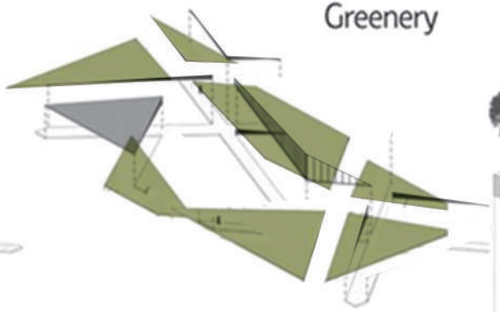
NUPL

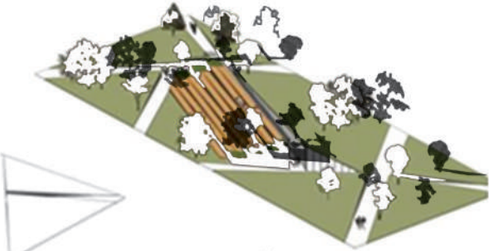
Pedestrian roads



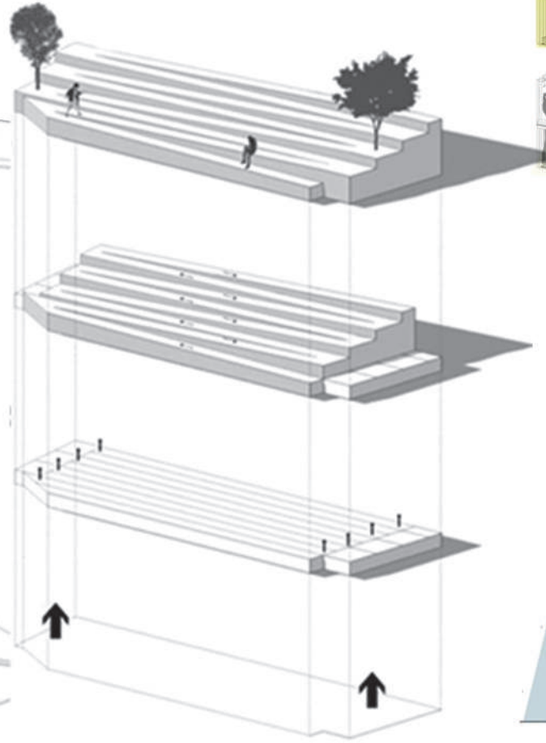
Masterplan scheme

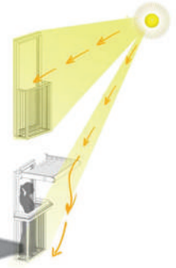
Greenery

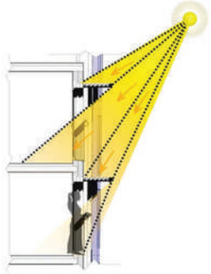




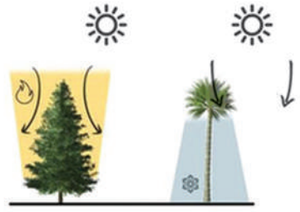
Forming of multilevel interactive platform

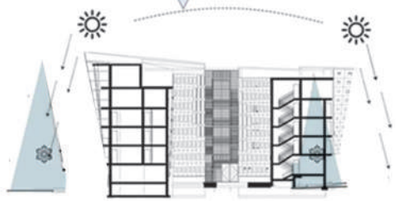


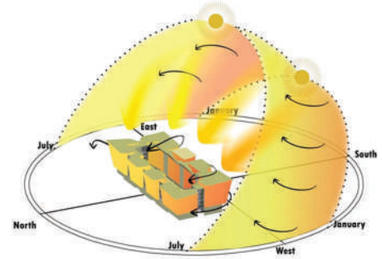




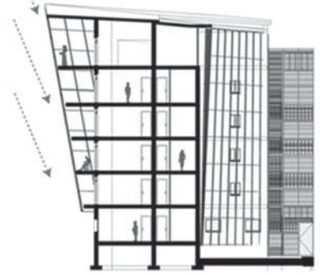
Evolution in nature







Hinged facades create comfortable shades on the terraces and reduce permanent heat loss of the building.



SELF SHADE
The surroundings will open up to leave more room, air, and light around the building

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