

# CAMPUS<sup>1</sup> OF JAN KOCHANOWSKI UNIVERSITY, CAMPUS OF KIELCE UNIVERSITY OF TECHNOLOGY – CREATION OF ACADEMIC PUBLIC SPACE IN KIELCE. PART 1

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## Modern campus – problems and trends

Campus location in compact center housing and strict planning directives often make university development impossible. They can constrain natural changes, worsen work and learning conditions and reduce competitiveness. Many historical universities contend with these problems. If land reserve for the development of didactic scientific institution isn't provided such institution becomes fragmented, decentralized and disorganized. City building density doesn't favor the development and building of public space, thus dispersion of faculties hinders their management and work coordination. The Finnish Technical University contended with such problems. They decided to move its headquarters from the center of Helsinki to the place called Otaniemi in Espoo (10 km from the city center). New location was conditioned by the neighborhood of the companies dealing with modern technologies. The university established close scientific collaboration with them. Very rich didactic administrative programme was connected with living cultural recreational part creating friendly and creative conditions for students and teaching staff. The whole unit was designed by the architect Alvaro Alto in the years 1949–1966 (his project was chosen in the contest).

Decision concerning the necessity of academic campus building gives the possibility of anticipating many options of university development and liberalization of spatial distribution in a manner which doesn't constrict future possibilities. Properly located and planned campus is a very important element of each university. It should be able to meet many tasks and at the same time to fulfill the needs of very active and demanding social group of students. Academic campus should contain not only scientific didactic and administrative, autonomy or hotel buildings, gastronomical, sanitary, cultural

and trade supply base, but also public space. Common elements are always the same: Rector's Office, Main Auditorium and multifunctional Forum. Here library, surgery, clubs, banks or post office are often located. Inseparable elements of campuses are also indoor sport complexes and outdoor sport-recreational areas. However it is necessary to remember that city and university life should exist in full correlation, to overlap and complete each other. It gives the possibility of natural coexisting of two active units in the frames of different spaces. In this case positive social interactions and common development take place.

On the grounds of very differentiated university programme and varied location conditions it is impossible to have repeatable spatial distribution or universal model of campus. Each new scientific didactic unit requires individual approach. Depending on the profile of university, programme, expected number of students as also location and region needs, certain ideological scheme which should always have possibility of reorganization or expansion is created. And for that reason land reserves near new-built campuses are so important. Universities have to keep pace with dynamism of changes and new needs which globalization carries.

Nowadays not only the fact whether an university can fulfill market needs with its profile but also if it is able to correspond to the needs of a contemporary student indicates university competitiveness. The majority of newly built campuses are elastic, multifunctional, evolving units being receptive to technical and multimedia innovations.

Creation of academic public space in the territory of campuses is very interesting and important problem. University campuses being city miniatures have formed within their boundaries widely available public areas. One could ask whether these areas can be called public spaces? Sociologists and

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<sup>1</sup> Campus – lat. *campus* – field, plain, nowadays academic housing development; Campus – Spelling form accepted by the

University in Kielce. I will use Polish spelling – kampus in this paper for form's sake.

planners have been making an attempt to define this term for many years. On the grounds of its diversity public space is very difficult to be classified and divided. When private property dominates new criterion which should be taken into consideration trying to classify this question emerges. Widely available public space is often de facto private property which is available on certain principles, not infrequently being temporarily constricted (i.e. at night).

Even though the definition concluded Land Planning and Development Act doesn't classify public space in terms of property, nevertheless this criterion is very important.<sup>2</sup> The document defines public space as „*area of special significance for fulfilling inhabitant needs, improving their life quality and favoring for relation establishment considering its location and functional, space features, defined in the study of determinants and directions of area development of a borough*”. Despite such definition more common formulation is „half-public space” which can be widely available private space as also appropriated or „occupied” public space.

In the sociological approach as also in legal or physical aspect the problem of public space is equally difficult to be defined mainly in view of subjective estimation of a recipient. And now we approach the term of social space which isn't created on the base of property or functions but on the base of needs and aspirations of a certain group of people using this space. Territoriality of such area is determined on the base of certain metaphysical aspect which is connected with individual and social identity. As for me social space is common space which can be used for free but at the same time it is necessary to abide by certain rules. It is difficult or sometimes even impossible to delimitate its boundaries because it exists in frames of ontological order. Community which influences uprising of this space is a dominating group and at the same time its constant recipient. Campus is an ideal sample of such space. Students and workers spending many years at the university organize the space around them in such a way to correspond their basic and higher needs. They want to feel well and securely in their environment. Large responsibility lies with architects because, knowingly or unknowingly, they influence creation of social space which

conditions belongingness of a group to the place through their activities.

Social space has always been inside my range of interests, and the type of this space which can be found in the university campuses is a special case for studies. According to my observations architects especially emphasis social space arranging new university complexes. It is often the whole system of public squares with changeable functions and arrangement which due to spatial and scenery connections form logical unity. People from „inside” can perceive such system as a maze full of abstruse symbols and solutions though they are understandable for students and teaching staff.

The University of New South Wales – Australian public higher institution with headquarters in Sydney has very interesting solution of public space. It consists of eight campuses. The main campus UNSW is situated on 38-hectare slot in the borough of Kensington on the east outskirts, only a few minutes away from the city center. Bar It is located in close neighborhood of main railway station and other important road hub. Public spaces are composed in such way to form continued stretch. Alongside it official places of general significance such as footways or forum and smaller chamber spaces such as squares in front of buildings or interdepartmental streets are situated. The Main Forum is created through extension of important footway with differentiated height level. Due to gradation the square is very functional and interesting. Height difference is advantage and the part of spatial composition, not an obstacle to be conquered. This solution became an inspiration for my later projects where I tried to use natural land relief in the best possible way (Fig. 1, 2, 3).

Many universities in Poland which headquarters were primarily located in the city centers struggled with dilemma which was connected with the necessity of development. Area possibilities for development of existing buildings or university moving to new spatial unlimited locations were investigated. Depending on both location and financial conditions we can observe different models and ideas which have been realized in Poland in recent decades.

The campuses in Torun and Poznan are academic complexes constructed in Polish urban planning and postwar architecture which deserve special atten-

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<sup>2</sup> Spatial Planning and Development Act on March 27<sup>th</sup>, 2003 (Law Gazette dated May 10<sup>th</sup>, 2003), art. 2, p. 6.

tion. There were several attempts to join the parts of campus of University in Torun creating one compact didactic scientific complex like in American Universities. Postwar reality was a reason why subsequent realization dates were postponed and the possibility of campus location was changed. Finally the area was chosen on the northwest outskirts of the city. The end of the first stage where all necessary buildings were within the scope of it was appointed for 1973. It was connected with celebrations of the 500th anniversary of Nicolaus Copernicus' birthday. This project was undertaken by the architects from Warsaw University of Technology under the management of doc. Ryszard Karłowicz. The team consisted of: Konrad Kucza-Kuczynski (Main Forum), Marek Rozanski (Rector's Office and Auditorium), Witold Benedek (library), Jozef Lucki (later he was replaced by Andrzej Jaworski, Chemistry Institute), Bogdan Poplawski (Faculty of Biology and Earth Sciences), Wincenty Szober (student houses, assistant hotels, canteen) and Zenon Buczkowski (surgery). The main premise elements were two perpendicularly criss-cross axes which formed a backbone of the academic campus. Public and half-public spaces were located alongside them. On the basis of them all scientific didactic objects which were characterized by homogenous architecture and living buildings of differentiated form and character were planned (Fig. 4).

Campus programme presupposed a number of didactic administrative, living buildings as also library, hostels, canteen, gymnasiums, surgery and student club. The system of non-didactic buildings was characterized by larger freedom of planning and form diversity at the same time keeping the character of the whole conception. The most important functions – rector's office, library and main auditorium – were situated at the junction of axes while the Main Forum has the character of social space facing smaller chamber half-public urban interiors dedicated to students.<sup>3</sup>

As the years go by flexible layout was completed and developed adding missing functions and new cultural objects. The whole of clear spatial arrangement was supplemented with footways and greenery

which plays an important role in the arrangement. Setting-up of the Campus of the University in Torun was one of the first comprehensive solutions in Poland with a complete programme which is necessary for university functioning.<sup>4</sup>

Next academic campus worth attention is Campus Morasco of the Adam Mickiewicz University in Poznan. It was also situated outside the boundaries of the center, in the north part of the city. It was decided that numerous scattered in the downtown buildings belonging to the university would concentrate in one academic campus which would join the majority of scientific environment of all Poznan universities. The idea which arose between 1960th and 1970th has never been completely realized and the process of its development and changes still lasts. Initial scale of multifunctional layout presupposed planned on a grand scale campus which would be situated on the 400-hectare slot connected with the center by quick city railway. The contest adjudicated 1974 was won by the architects: Marian Fikus and Jerzy Gurawski. Financial problems and variable ideas of subsequent rectors were the reason why only a small number of faculties was moved to the territory of the campus, and the university authorities remained in the previous headquarters situated in the center of Poznan. Subject of new faculty building appeared after Polish admission to European Union and the possibility of co-finance of new investments from EU funds again. Despite multi-stage building this complex forms a compact whole of homogenous character which is partially connected with the fact that most of buildings were designed by the architect Jerzy Gurawski who was a coauthor of the main conception<sup>5</sup> (Fig. 5, 6).

The examples of modern campuses which have been arising over the last decade can be: the Białystok University Campus designed by the architect Marek Budzynski together with the team and the Campus of the 600th anniversary of Renovation of Jagiellonian University realized on the basis of the coordinating plan for the Campus III of the Jagiellonian University together with Technology Park which was designed by the Institute of Landscape Architecture and Computer Center of Cracow Uni-

<sup>3</sup> M. Pszczolkowski, *Campus of the Nicolaus Copernicus University in Torun 1967–1973*; "Quarterly of Architecture and Urban Planning", 2010, 1-2, p. 39-52.

<sup>4</sup> M. Pszczolkowski, *Architecture of Nicolaus Copernicus University*, Publishing House of Nicolaus Copernicus University, 2009.

<sup>5</sup> B. Miskiewicz, *University of Poznan. Facts, Thoughts, Memories*, UAM Poznan 1983.

versity of Technology in 1998. Both layouts are under construction.

Construction of THE Cracow campus has been comprised in Long-term Programme to be realized in 2001–2015 and it is built mainly from the funds of the government budget. Spatial arrangement of the Campus III of the Jagiellonian University is based on two vistas which at the same time become the main axes of public spaces of the layout. The buildings of some faculties are situated in the built quarters. Close neighborhood of Cracow Special Economic Zone and Technology Park makes this solution unique and innovative. Planned didactic scientific collaboration is an innovative idea in this part of Europe. The campus is planned in the green areas of west wedge in the neighborhood of Technology So this conception is based on the natural spatial advantages and view facing areas where recreation functions are situated. The whole layout is situated on the 130-hectare slot. Besides a didactic-scientific part the programme presupposes the complex of sport-recreational and domestic buildings. Now the campus struggles with financial problems connected with maintenance of constructed buildings.<sup>6</sup>

The construction of the Campus in Bialystok was initiated in October 2011. It considers building of two compact building groups of homogenous character which will occupy half of the 30-hectare slot. The rest of the slot will be occupied by the park. The buildings are located around public spaces – squares which were created at intersections of communication layout (Fig. 7).

The areas are planned to be covered with vegetation which will provide better integration of buildings with surrounding greenery. The project considers five buildings. Four of them are situated around the Square of Science Synthesis. The programme is enriched with a number of cultural and recreational functions and it also presupposes construction of new buildings in future. Ultimately the university plans to move all faculties to a new academic campus. Now they are scattered throughout the city. The first stage of investment co-financed from the Programme of Western Poland Development is planned to be finished in 2015<sup>7</sup> (Fig. 8).

## Universities (academic institutions) in Kielce – history, present situation

The history of the universities in Kielce began in 60th years of XX s. owing to a general economic activity of the country. In 1966 the Higher Engineer School arose as a first . It was transformed into the Kielce University of Technology. In 1969 on the basis of the Teaching Center the Higher Teaching School was created. It was lately transformed into the Jan Kochanowski Higher Pedagogical School. Initially it consisted of three faculties: Human, Mathematics and Natural Sciences and Pedagogical. In the next years new faculties, specialties and new headquarters appeared which were scattered all around the city. Actively developing School gained the status of academy by Polish Parliament resolution. Owing to this fact it changed its name into the Jan Kochanowski Swietokrzyska Academy. Next years involved gaining of new didactic authorizations by the university, enlargement and reorganization of inner structures, fitting of the education programme to EU requirements and improvement of didactic scientific conditions. In 2008 efforts of the Academy were appreciated and it was transformed into the University of Human and Natural Sciences (common university) and in 2011 it gained the status of classical university, transforming its name into Jan Kochanowski University in Kielce.

Kielce is relatively young scientific center with initially poor academic structure. Since the second half of the 20th century it has been constantly developing. Nowadays in the city there are 12 universities. Jan Kochanowski University is most important among them. 1639 people (including 909 academic teachers) work there and over 16 thousand students<sup>8</sup> study 34 specialties at the university. The necessity of development of didactic scientific supply buildings was caused by constantly growing structures and students' interest in the university. Since March 2009 the university joined long-term project „Enlargement of Research Base of Specialized Laboratories of Public Universities in Swietokrzyski Region”. Strategic element of this programme is an

<sup>6</sup> A. Böhm, *Local Spatial Development Plan of the III Campus of the Jagiellonian University*, “Technical Magazine” 1-A, Cracow University of Technology Publishing House 2008, p. 69-76.

<sup>7</sup> Portal of European Funds, (<http://www.funduszeuropejskie.gov.pl>).

<sup>8</sup> November 30.11.2012. Information taken from the website of the Jan Kochanowski University in Kielce, (source: [www.ujk.edu.pl](http://www.ujk.edu.pl)).

enlargement of the academic campus which is situated in a northwest part of the city on Swietokrzyska street. First of all the choice of new headquarters involved the possibility of enlargement of the university and area availability. Previous buildings belonging to the university were located mainly in compact downtown settlement which precluded further development. Decentralization and hindered university development where the reason why it was decided to move the majority of the faculties of administrative buildings to new location. Due to these operations enjoyment of didactic scientific proposition will be easier and less time-absorbing. It also gives the possibility of social and recreational space development and simplifies interdepartmental dialogue causing increased interaction, opinion and innovative idea exchange between the specialists from different branches (this idea lied, inter alia, behind the Free University of Berlin and MIT in Boston).

It should be borne in mind that economic reasons of future use also favoured territorial centralization. Besides better organization and work coordination time saving of students and teachers is also provided thereby directly translating into work productivity. Taking into consideration bad technical condition of some departmental buildings and the necessity of their repair the decision on an academic campus building is vindicated. The university development has been subscribed by UE means. The subsidy has been also provided by the Ministry of Education.

It made the beginning of the whole project realization possible. The university gained prestige thanks to strong lobbying of the politicians in aid of Kielce region and creation of separate voivodeship there. Numerous grants for scientific researches helped to build a strong teaching staff. Consistent activities of consecutive rectors in aid of the development programme caused modern advanced position of the campus and many new activities assisting its development.

New location at the junction of Solidarnosc Avenue (previous Lipcowy Manifest Street) and Swietokrzyska Street is few minute public transport drive away from the center (ap. 2.5 km). The slots A and B are situated in the neighborhood of undeveloped lands which are well communicated with the whole region. They are separated with undeveloped green belt being private property. Excessive price makes it impossible for the University to buy it. Some of the most serious spatial challenges are:

different ground level (slope on the south side is 8% in some places ) and lack of decision concerning investment in the belt dividing two slots.

The land on the north side of the academic campus is excluded from the building because of a large land gradient (up to 12%) and greenery arrangement which is an extension of Dygasinski Park. Higher up, at top of the hill the houses of the prominent citizens of Kielce are built. On the west side there the complex of office buildings is located and hotel-congress building is developed. Both of them belong to Skanska (previous Exbud, nowadays – private). Behind the Solidarnosc Avenue there the housing estates which have been built since 1960th are situated. On the west side there is undeveloped meadow-field area. On the south side along the second street – Swietokrzyska – there are service-commerce and stock buildings (partially deserted) (Fig. 9).

Near the campus of the Jan Kochanowski University there is situated Kielce University of Technology – the oldest university in Kielce. Its campus is located in the 22-hectare slot which is situated in the city center. Both universities collaborate in the field of didactics and science. Together they gained EU funds from the Operational Programme “Innovative Economy” which were dedicated to the building of the specialized laboratories. There is also the idea of creating the University Center through amalgamation of both areas with Kielce Technology Park. It would arise in a deserted and postindustrial area which is situated on the opposite side of Swietokrzyska street. It would give the possibility of creating a number of public spaces which could be connected with historical center. Such solution would make arrangement of an undercapitalized and neglected part of the city possible and fit to European trend of re-urbanization. Extensive functional spatial revitalization would increase the value of this part of the city and raise it to a rank of friendly and receptive to investment borough.

### **Campus of the University in Kielce**

Purchase of a 13 hectare-large slot in the neighborhood of already existing Faculty of Mathematics and Natural Sciences which has been functioning in this place since 1990s sealed the decision concerning the campus building at the junction of Solidarnosc Avenue and Swietokrzyska Street.

In the same year, the Studio of conditionality and trends of spatial arrangement in Kielce city<sup>9</sup> has been founded where the bought campus area has been planned for „commercial and service functions of higher significance” and large-size building. This document points the necessity of connection of new public spaces with landscape terrains which are situated on the north side of the planned buildings as also keeping of natural slope.

Totally the university allotted a 21 hectare-large area of 21 ha for an academic campus. This area was symbolically divided into parts A and B. The lots are separated by undeveloped private meadow greenery belt (Fig. 10).

Decision concerning construction of new campus of the academy on partially undeveloped land in the east borough of Kielce has been taken on the basis of the urban evaluations prepared by the architect Alicja Bojarowicz. This conception also included the area situated between already bought lots and those which were planned to be bought in future.

### **Campus – part A (building G) 2004 – 2012**

Aspirations of Swietokrzyska Academy to gain the university title involved the necessity of enlargement of scientific, didactic and social space. These changes have been initiated in 2004 and the first stage of intensive development being almost completely financed from UE funds is planned to be finished in 2013. The competition for the Campus A edited in April 2004 by the department of Union of Polish Architects in Kielce was won by the studio PPIP – Project Studio Janusz Pachowski.

The conception of spatial arrangement has been worked out on the basis of instructions resulting from the Conception of development of the Swietokrzyska Academy campus. New buildings have been planned in the form of peripheral building situated along regulation line. It has been created the urban quarter facing Swietokrzyska street with building descending in the north frontage in order to keep view of the hills. The Interior which arose between higher buildings faces the south side of Kielce center creating social space of the university dedicated to recreation. External streets are led according to the instructions of the Conception of

Campus Development. Along the streets there some parking groups have been planned according to the segments of new building.

The conception of pedestrian streets is based on the main stretch in the north-south direction which has been built in accordance with the Conception of Campus Development inside the quarter. Perpendicularly to it two cross stretches have been built connecting east and west frontage of the quarter. At the beginning of the south stretch with parking exits in the east part of the slot there is a square in front of the Conference Center. In the parking and existing building area it faces Exbud buildings. Cross north stretch brought out through the arcade under the east wing of designed building closes the planned public spaces in the form of the square in front of the main entrance of new building. In future this stretch has a chance to become the main axis of the University Campus. Planning terraced footways (stairs, chutes) natural south slope enriched with resistant dikes, bank and tree lines has been used (Fig. 11).

The main hall is a central element of the didactic building. This is a place which concentrates social life of the university. There is one hall for all institutes. Due to this solution the integration of students and merging of scientific and social life are possible. From the central part communication risers in particular units and two changing room supporting all institutes are also accessible (Fig. 12).

Designed buildings refer to existing Faculty of Mathematics and Natural Sciences with height and spatial arrangement being its extension. They are also connected with it with a corridor. Single-storey pavilion inside the square is kept together with surrounding space separated by the row of trees. In accordance with competition guidelines the campus A consists of: Institute of Chemistry (east wing), Institute of Environment Protection, Management and Planning (west wing), Modern Technology Center and common institutional Scientific Research Institute.

Didactic building is a multifunctional complex with similar modular chemistry laboratories with backup purposed for a large quantity of users. Segmental arrangement of the object consisting of five multi-storey units is planned accordingly. Each of them consists of:

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<sup>9</sup> Act No 580/2000 by City Council in Kielce dated October 26<sup>th</sup>, 2000 together with changes.

- Vertical traffic system (staircase and lift);
- Installation gap all along the height of the building along the corridor providing the possibility of constant modification and maintenance of all risers;
- Ventilation rooms (air conditioning rooms) are on the roof and on the first floor.

There are large student laboratories in one riser (with fume hoods and the complete installation service) and master' laboratories in all five units, on each floor. Due to this solution the number of ventilation horizontal cables is maximally reduced. Five buildings are "clipped" all along the length and width with one installation gap (well).

It was agreed that on the same side of the facade where laboratories are located other work-rooms of doctoral candidates are situated. On the opposite side there are researches' rooms and seminar rooms. Lack of functional restrictions dictated by building arrangement also makes organizational changes of the institutes, different object division etc. possible in future. Didactic buildings consist of two wings joined in the middle part with storey block II and III. Due to this descending complex ventilation and the possibility of landscape view is achieved. The rooms of the faculty authorities and faculty council are situated in the middle wing on the third floor. On this floor the view of the main hall is provided from the mezzanine.

Large lyceum of the Institute of Chemistry with mezzanine- gallery level lobby can play the role of the auditorium of citywide significance. Due to the equipment types installed in the buildings and the field of their activities two special units of the complex, that is Scientific Research Institute (common institutional) and Modern Technology Center, are located on the ground floor of the building of the Institute of Chemistry with the possibility of separate inside access. Lyceums can be used also by other faculties and institutes located in this building.

The building is planned in monolithic reinforced concrete construction in a plate-columnar arrangement. Basic building block in a diagonal arrangement is 6 m long and in an elongated arrangement is 5,4 m and 7 m long. On the wall elevations rusticated stucco is proposed with elements of curtain wall elevations and small elements with cladding from laminated boards HPL. In the wall elevation the division into five inner spatial blocks is emphasized. The building of Museum of the Earth will bound the square in the central part. Light modular

design with a large number of windows and the dark block of the first floor where audiovisual room is located is in contrast to sober facades of the Faculty of Mathematics and Natural Sciences (Fig. 13).

High-level modern complex of the Swietokrzyska Academy campus (including existing and planned buildings in the next stages) has been constructed. It corresponds the needs of the city and the region as also academy aspirations. Architecture modularity makes the stage realization of the investment possible.

On the basis of the competition conception in December 2004 the building project was worked out in order to receive building permit. Detailed design was divided into two stages: the first one was handed over in September 2005 and the second one – in June 2006. In the stage of detailed projects and during the construction the studio had to solve a number of technical problems. The first challenge proved to be the territory dedicated to the investment as also land relief and geological structure. Works were started with leveling of terrain and demolishing of needless buildings. In connection with the foundation on the rock it was necessary to design shallow diggings not only for the foundations but also for infrastructure. Terrain slope necessitated additional landslide protective solutions (stoops, resistant dikes and chutes) as also evaluation of fire lane location. Its bank can't exceed 5%.

Division of the didactic building into five units involved concentration of installation systems, vertical and horizontal slots. The units had to provide flexible exploitation manner, laboratory independence, their presumptive compatibility (it took place because there were some little changes in the structure of the Institute of Chemistry).

Technical rooms were situated in the attic of the building. Engine rooms, ventilation rooms and other rooms were grouped and planned on the highest floor. With so different functions which auditoria, laboratories and lyceums as also other structures of planned and existing building perform it was devoted much attention to optimal harmony of storeys and easy accessibility of all rooms (Fig. 14).

Building works of the auditoria located between high faculty wings were divided into two stages. Initially (July 2006 – July 2008) only the biggest auditorium with the main hall was finished making amalgamation of five-storey buildings possible. Unconstructed four auditoria on the north side were replaced with solid wall closing the hall area (you

can see it on the following photos). It became an important retaining 5 meter-high wall (level difference between flooring and ground level on the north side). In the second stage (April 2010 – April 2012) the wall closing previous arrangement was dismantled and on the north side other auditoria were built completing missing functions and the form of inner public space.

Besides undeniable esthetic values and functional advantages the glass roof involved the necessity of precise technical solutions and fulfillment of fire protection requirements. Small distance from the higher buildings involved the usage of the solutions providing fire resistance – E130.

Due to the use of the rooflights the main hall gained constant access to the daily light creating a suitable climate in the interior and „indirect” light to the office rooms on the first floor (windows REI60). Transparency and luminance of this space caused highlighting of architectonic solutions and used materials. However the full effect was achieved after the second building stage when the north auditoria were built on imparting a depth to the interior through spatial amalgamations (corridors, balconies). Just after the finishing of the first stage this space has become the main interior – social space for students and workers of the whole university (Fig. 15).

In regard of view connections along the north facade the gallery was planned joining east and west wing being at the same time the main lobby of the auditorium. Academic bar was located under the mezzanine. View over the forum and the city stretched beyond this place.

The most functional planning of the rooms in the building involved unsuitable location of them in regard to the sides of the world. The laboratories were on the east and west sides exposed to excessive sun. In order to protect against the excessive sun exposure the system of automatic rollers and local air conditioning was used in some rooms. Professors’, assistants’, and doctoral candidates’ rooms were situated on the inner side in the basement of the building.

The character of the building required choosing of appropriate finishing materials. Initially the project planned chemical resistant PVC resins in the laboratories, but in the stage of realization they were replaced with chemical resistant PVC coverings for esthetic and technological reasons.

It was necessary to keep constantly in mind the level of the existing building. In order to even the

levels of the joined buildings the corridors were planned with several percent’ chutes. Steel construction was partially screened with plaster boards for fire protection reasons. The skyway was realized in the second stage of the investment (Fig. 16).

The creation of the social space had very important meaning in the designed campus. It consists of the main hall joining all faculties and inner space – forum scenically and functionally connected with the hall. The priority was to design these two areas in a one-line manner so they would complete and influence each other.

The areas which join these spaces are arcades which refer to university traditions through their monumentality. Due to use of the transparent bulkheads the direct view connection with the square and the city panorama is provided. The main hall – lobby – functions as a connection between the inner area of the university and public spaces. It also serves as transition zone and the main functional element of the building. Its arrangement and design harmonize with the materials used in the square in front of the building. Monumental form and esthetics inform about proper way of behaving intuitively organizing social division. It is also information source as a possible exhibition space and specific public space with its typical communication. The Coffee bars, lobby, furniture and greenery divide and segregate the space. The materials used in the main hall and inner zone are also chosen in a special way. The flooring as an element influencing the space continuity underlines their programme homogeneity. Dominating material in the entrance area is milled rock. Even though they differ with climate conditions; temperature, rainfall quantity and sanitary exploiting requirements it was succeeded to use the flooring with similar design and stylistics with visible strip pattern. Inside the building the mixture of polished, half-polished and brushed milled rock boards was used. Outside the terrace was made of granite boards and the stairs – from individual prefabricated elements from architectural concrete (Fig. 17).

External forum uses land relief in a natural manner. It faces the south side of the city. The ground floor of the skyway joining new and existing buildings was designed so that this space serves not only as a lane but also as a passage for delivery cars and fire brigade. For this reason proper parameters of the passage and the chutes evening the level were used. Green lawn near the fountain is at the same time the shunting time for the security and fire brigades. The



passages under the skyways are important elements of the main axis which begins on the west side with the front gantry joining both campuses (Fig. 18, 19).

The materials used inside the building are also very important. Homogeneous coverings PVC with high abrasion resistance are used in the corridors and on the stairs. Stitched and acoustic coverings as also segmental ceilings are used in the corridor of the mezzanine, on the main stairs and in the auditoria to provide suitable acoustic conditions. They are characterized by high solidity, esthetics and good sound absorption. Laminated plaster boards HPL are used as coverings in the corridors. Laminated door of the highest class with steel door frames have been chosen as they are very firm and vandal resistant. The part of the wings need to have noise reduction – up to – 45 db (Fig. 20).

Many technical problems were connected with technical infrastructure of the area. The problem of heating supply appeared in the stage of the building project. The solution which would enable to reduce future operating costs was own heating room.

Flow speed had to be reduced considering low permeability of municipal net of rain water. It was achieved due to use of gravel roofs which partially held (stopped) and reduced the water (Fig. 21). Gas supply was planned as separate connection on the north side of the building and the transform station was located in the basement on the southwest side.

Some of technical problems were solved during the realization of particular stages of the investment. Building documentation presupposed building construction (campus part A) with usable floor area of 18000 m<sup>2</sup>. It has been built ap. 15000 m<sup>2</sup>. The term of building work beginning of the other buildings hasn't been indicated. It allows to suppose that spatial arrangement of the whole area of the campus A will not be finalized in the nearest future.

We can symbolically divide building works into three stages:

I stage (July 2006 – July 2008) – building of two most important scientific didactic wings with the main hall which interconnects them and the biggest auditorium (without four auditoria on the north side);

II stage (April 2010 – April 2012) – realization of other auditoria on the north side, part of the east

wing and the skyway between planned and existing buildings;

III stage (not realized, nevertheless there is valid building permit) – Museum of the Earth, Congress Center, the development elements of the whole arrangement axis, greenery.

The investment has been co-financed through the EFRR (European Regional Development Fund). The university has also got some funding from the Ministry of Science and Higher Education, other funds have been contributed by the Jan Kochanowski University<sup>10</sup> (Fig. 22, 23). Unconstructed part of the layout – Museum, Congress Center and connected with them public spaces.

The Museum was planned so that its exhibition rooms would “descend” in a terrace manner towards Swietokrzyska street. On the south side the building would create symbolic gate to the forum and underline arrangement axis.

Unconstructed Congress Center with a hotel planned as glamorous front building is a missing element of the whole layout. The campus doesn't have “the beginning” of the arrangement while the square – space between the Faculty of Mathematics and Natural Sciences doesn't function. Nobody knows what will happen to this project as building permit for this complex will expire in the near future.

Translated by the Author

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<sup>10</sup> Information taken from the official website of the university, 15.03.2013, (www.ujk.edu.pl).