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FROM THE AIRPORT TO THE CAMPUS – SPATIAL TRANSFORMATION OF THE CRACOW UNIVERSITY OF TECHNOLOGY AREA IN CZYŻYNY

OD LOTNISKA DO KAMPUSU – ZMIANY W PRZESTRZENI OBSZARU POLITECHNIKI KRAKOWSKIEJ W CZYŻYNYCH

Abstract

The article discusses urban projects and spatial transformations that influenced the architectural space of the Cracow University of Technology (CUT) campus in Czyżyny during the 20th and 21st centuries. The research objective is to present the architectural and urban-planning concepts developed for the campus area by the Faculty of Architecture's academic community. These projects are compared with the buildings and functions that were actually created here. The article summarises many years of the author's research and on-site observations. Research methods include literature studies, analysis of planning documents, and in-situ fieldwork. The findings show that, regardless of planned or undertaken urban-development projects, the current space was not formed as a result of their implementation. The present spatial form is a sum of fragmented architectural decisions made in different styles. Diversity is a defining feature of this space. However, this does not mean chaos. The urban plan, particularly the concept of public space, which is crucial for the campus's development, should provide a spatial framework to co-ordinate future investments.

Keywords: architecture and urban planning of Krakow, CUT campus in Czyżyny, Krakow Technology Park, spatial planning, spatial transformation

Streszczenie

W artykule omówiono projekty i zmiany przestrzenne, które wpłynęły na przestrzeń architektoniczną kampusu Politechniki Krakowskiej (PK) w Czyżynach na przestrzeni XX i XXI wieku. Celem badawczym jest ukazanie projektów architektoniczno-urbanistycznych, które były opracowane dla obszaru kampusu przez środowisko akademickie Wydziału Architektury. Projekty te zestawiono z realizacją zabudowy i funkcji, która tu powstała. Artykuł stanowi podsumowanie wieloletnich autorskich badań tego terenu. Metody badań obejmują: studia literaturowe, analizy dokumentów planistycznych, badania terenowe in situ. W efekcie wykazano, iż niezależnie od planowanych czy podejmowanych projektów urbanistycznych, obecna przestrzeń nie powstała w wyniku ich realizacji. Dzisiejsza forma przestrzenna kampusu jest sumą fragmentarycznych decyzji architektonicznych o odmiennej stylistyce. Różnorodność stanowi cechę charakterystyczną tej przestrzeni. Nie może ona jednak oznaczać chaosu. Zapis urbanistyczny, w szczególności koncepcji przestrzeni publicznej, kluczowej dla rozwoju kampusu, powinien stanowić ramy przestrzenne koordynujące dalsze inwestycje.

Słowa kluczowe: architektura i urbanistyka Krakowa, kampus PK Czyżyny, Krakowski Park Technologiczny, planowanie przestrzenne, transformacja przestrzenna

1. INTRODUCTION

The article discusses spatial changes and projects that influenced the architectural space of the Cracow University of Technology (CUT) campus in Czyżyny during the 20th and 21st centuries. The geographical area of research was delimited as follows: from the north by General Tadeusz Bór-Komorowski Avenue, from the east by Izydor Stella-Sawicki Street, from the south by Aleja Pokoju, and from the west by Polish Aviators' Park and the planned Aviation Cultural Park¹. The author adopts the terms 'Czyżyny campus/area' and 'CUT campus' to denote this area, which was covered by the first urban concept designed by Prof. Witold Cęckiewicz, however, the contemporary CUT property boundaries are narrower. The research goal is to demonstrate the impact of architectural and urban projects for the CUT campus, made by the Faculty of Architecture's academic community, on the implementation of the development and functions that were ultimately created there. The background for these considerations is a concise analysis of the spatial policy for this area in archival planning documents. The article summarises many years of the author's research on this area. The research methods employed include literature studies, analysis of planning documents, archival orthophotomaps, photographic documentation, and the author's own in-situ field research.

In the course of the research process concerning the spatial development of the CUT area in Czyżyny, the following issues were considered:

- the city's spatial policy regarding the Czyżyny area,
- the university's investment policy expressed in urban concepts of the campus,
- the manner of the facilities' implementation, their architectural form and relationship with the surroundings,
- trends in the spatial transformation of the area.

2. SPATIAL DEVELOPMENT OF THE CUT CAMPUS IN CZYŻYNY

The CUT campus in Czyżyny is located in the central part of the former Rakowice-Czyżyny Airport, which operated between 1912 and 1963². This land was incorporated into its boundaries during successive modernisations undertaken in the inter-war period³. In the 1960s, a new stage in the development of this area commenced with the closure of the airport and subsequent division of its land for various purposes. This decision led to the irreversible disintegration of the unique, central layout of the Polish airport from the inter-war period⁴.

¹ The concept of the Aviation Culture Park was developed in 1992 and refined between 1999 and 2002 under the supervision of Prof. M. Łuczyńska-Bruzda: J. Środulska-Wielgus, K. Wielgus, *Park Lotników Polskich. Od zieleni fortecznej i lotniska Rakowice-Czyżyny do Lotniczego Parku Kulturowego*, Ośrodek Kultury im C.K. Norwida, Kraków 2019, p. 61.

² The origins of the airport date back to 1910, when the meadows of the former village of Rakowice served as a take-off field for the first military aircraft of the Austro-Hungarian Empire. In 1912, a 55-hectare military airport was opened. M. Mikulski, *Z historii krakowskiego cywilnego portu lotniczego Rakowice-Czyżyny*, "Kwartalnik Historii Nauki i Techniki" 1972, no. 1, pp. 89–106.

³ The diagram of historical changes at Rakowice-Czyżyny Airport in Krakow, prepared under the supervision of Prof. M. Łuczyńska-Bruzda in 2002, presents the detailed expansion of the airport during individual years. J. Środulska-Wielgus, K. Wielgus, *op. cit.*, p. 36.

⁴ *Ibidem*, p. 14

The majority of the taxiways were destroyed, and a multi-lane arterial road, named after Izydor Stella-Sawicki, the pre-war airport hangar designer and inaugural rector of CUT, traversed the runway from the 1940s. The road system delimiting the CUT area was finally completed in 2001⁵.

2.1. THE CZYŻYNY CAMPUS IN THE PLANNING DOCUMENTS OF THE CITY OF KRAKOW

The transformation of the spatial structure of the former airport in Czyżyny is not only the result of plans developed by the university authorities but, above all, a consequence of the implementation of the city's spatial policy. A brief analysis of Krakow's planning documents reveals the impact of strategic decisions on the development of the CUT campus area.

In the General Spatial Development Plan of Krakow from 1958, prepared under the direction of Zbigniew Karakiewicz, the Czyżyny area was still designated for airport use. The strategic decision to close the airport down was reflected in the subsequent General Plan from 1967, developed under the supervision of Stanisław Hager. In this area, the Plan proposed the construction of a major north-south city primary artery, with a western branch and a large road junction, as well as multi-family housing estates with services, industrial zones, and urban greenery⁶. It constituted a kind of green-belt 'seam', separating Krakow from Nowa Huta and functioning as the city's ventilation corridor.

In 1968, the central part of the green belt was transferred to the Cracow University of Technology for the purpose of campus development⁷. This change is reflected in the subsequent Local Spatial Development Plan of the Krakow Urban Complex (KZM), developed under the direction of Krystian Seibert in 1977. The plan introduced the idea of creating a corridor in the Czyżyny area for scientific functions, which were meant to be a key element in the city's development at this time⁸. The planned Stella-Sawicki and Bór-Komorowski streets, as well as the never-implemented KZM North-South expressway,⁹ bounded the 'scientific corridor'. Within this zone, specific areas were allocated for academic facilities and collective housing intended for the CUT community, with precise provisions for the functions of each individual object. In contrast to the guidelines of the 1967 plan, the runway was retained as a peri-urban green area and the compositional axis of the area. The construction of a Main Power Supply Point and high-voltage lines was also planned¹⁰.

⁵ Built in the 1990s, the layout of General T. Bór-Komorowski Avenue (part of national road no. 79) and I. Stella-Sawicki Street (part of provincial road No. 776) – under construction since the 1980s, forms part of the third city-ring road and creates a linear barrier separating the campus from the surrounding residential and commercial areas.

⁶ *Plan ogólny Miasta Krakowa 1967 – nieobowiązujący* [in:] BIP UMK, 7.02.2012, https://www.bip.krakow.pl/?sub_dok_id=49205 (access: 7.07.2025).

⁷ The CUT Senate adopted the resolution on the construction of the CUT campus in Czyżyny on 14 June 1968: L. Peters, *Plan dla Czyżyn: łączenie potencjałów*, "Nasza Politechnika" 2022, no. 6–8, pp. 2–7.

⁸ Rzegocińska-Tyżuk B., *Współczesne realizacje dla szkolnictwa wyższego w przestrzeni Krakowa*, "Studia KPZK" 2008, no. 121, pp. 350–359.

⁹ KZM specific provisions, District A, part 24, pp. 13, *Plan ogólny Miasta Krakowa 1977 – nieobowiązujący* [in:] BIP UMK, 7.02.2012, https://www.bip.krakow.pl/?sub_dok_id=49206 (access: 7.07.2025). The construction of the North-South expressway was abandoned in the 1980s. It is no longer planned in the subsequent document from 1988.

¹⁰ KZM specific provisions, District C, part 2, pp. 9–11, *ibidem*.

In the 1988 General Local Spatial Development Plan (MPOZP) of Krakow, prepared under the supervision of Prof. Zygmunt Ziobrowski, the CUT area retained its scientific function and was classified, among other things, as a zone for compact urban development, a concentration of services and employment, and the location of housing complexes. The latter could be implemented only for use as university staff housing¹¹. The MPOZP from 1994, prepared under the direction of Prof. Z. Ziobrowski, adapted planning provisions to the new economic conditions by introducing more flexible land-use regulations¹². The CUT area in Czyżyny was designated for the development of public services (UP)¹³, enabling the implementation of a wide range of facilities extending beyond purely academic or scientific use. This functional flexibility allowed the establishment of the Krakow Technology Park – Special Economic Zone (KPT–SEZ) in 1997. This institution represented a strategic element for the city’s and the university’s development. Transport services for the area were meant to be provided by a newly planned local street with a tram line, cutting across the CUT area along an east-west axis, and by a fast tram line planned along the still-unbuilt main Stella-Sawicki Street¹⁴. For the majority of the designated PK areas, spatial policy provisions were in force as a result of applicable zones for the preservation of general urban environmental conditions, protection and shaping of scenic values, recomposition of the urban layout, urban intensity, and, along Stella-Sawickiego Street, permissible intensification of investment¹⁵.

In turn, in the 2003 *Study of the Conditions and Directions of Spatial Development of the City of Krakow* (SUIKZP), prepared under the supervision of Robert Kuzianik, the CUT area was incorporated into the city’s key scientific and technological activation zone: Czyżyny-Dąbie. This area was identified as strategically important for shaping the city’s spatial structure, supporting economic development, and enhancing its international profile¹⁶. The SUIKZP also upheld the concept of two tram lines originally planned in 1994. Due to its significant supra-local and metropolitan importance for the development of Krakow, preparation of a local spatial development plan of the Czyżyny-Dąbie area has been designated as a priority in order to secure it from chaotic development¹⁷.

¹¹ *Plan ogólny Miasta Krakowa 1988 – nieobowiązujący* [in:] BIP UMK, 7.02.2012, https://www.bip.krakow.pl/?sub_dok_id=49207 (access: 7.07.2025).

¹² The level of detail concerning land use designations was reduced in favour of greater specificity regarding construction conditions and methods of development. M. Łasocha, M. Jaśkiewicz, R. Kuzianik, *Profesor Zygmunt Ziobrowski: Życie poświęcone przestrzeni*, “Teki Komisji Urbanistyki i Architektury w Krakowie” 2024, no. 1, pp. 387–410.

¹³ In the provisions of 1994 MPOZP of Krakow, the primary purpose of land in the “UP” area was for science, education, culture, health- and social-care services, public administration, religious, special, and other facilities. The location of green areas and sports facilities, infrastructure, commercial services, residential functions related to the primary purpose, business incubators, technology parks, fairs and exhibitions was also permitted, according to §24 of the Resolution: Uchwała Nr VII/58/94 RMK z dnia 16 listopada 1994 r.

¹⁴ The currently completed section of Stefana Steca Street, between the exit from I. Stella-Sawickiego Street and the turn into Prof. Michała Życzkowskiego Street, was built on the site of the originally planned street.

¹⁵ *Plan ogólny Miasta Krakowa 1994 – nieobowiązujący* [in:] BIP UMK, 7.02.2012, https://www.bip.krakow.pl/?sub_dok_id=49209 (access: 7.07.2025); Uchwała Nr VII/58/94, *op.cit.*

¹⁶ *Studium Uwarunkowań i Kierunków Zagospodarowania Przestrzennego (SUIKZP) Miasta Krakowa*, Kraków 2003; Uchwała Nr XII/87/03 RMK z dnia 16 kwietnia 2003 r.

¹⁷ *Program Sporządzania Miejscowych Planów Zagospodarowania Przestrzennego*, UMK, Kraków 2003.

In the Czyżyny–Dąbie Local Spatial Development Plan (MPZP)¹⁸, adopted in 2007, the CUT areas were designated for production, technology, and service functions, including KPT–SSE complexes in the western part; multi-family and collective housing with accompanying services, landscaped green spaces, and sports facilities in the north-eastern; and zones for science, congress, and exhibition activities in the south-eastern. Detailed development and land-use guidelines were established for these areas. In addition, the MPZP reorganised the area’s transport network by introducing a coherent system of local roads, major pedestrian paths, and bicycle routes – including a path along the preserved runway – and underground tram lines with a stop located within the CUT area.

The next planning document, and the only one currently¹⁹ relating to this area, is the 2014 *Amendment* to SUIKZP. The CUT campus was no longer designated as a strategic area, despite the ongoing development of the technology park and the planned construction of an exhibition and trade-fair centre. The development of service areas in the southern section and multi-family housing and service in the northern section were also planned. The principles of the planned public transport services were changed by introducing a tram line running exclusively along Stella-Sawicki Street, as well as a metro line with a stop near the intersection of this street with Bór-Komorowski Avenue. Part of the area was included in the city’s aero-sanitary zone. Some provisions were introduced regarding variations in building height, allowing for tall structures (up to 36 metres) along major transport corridors²⁰. This guideline influenced subsequent university urban-planning concepts.

2.2. URBAN PLANNING CONCEPTS AND IMPLEMENTATIONS

The campus area has been gradually developed since the 1970s, in accordance with an urban concept created under the supervision of Prof. Witold Cęckiewicz²¹. In this concept, the former runway, surrounded by green areas, sports facilities and low-rise buildings, played an important compositional role. The runway was intersected by a main public space integrating the entire complex along a north–south axis. This compositional axis, consisting of wide promenades and squares, was accentuated by the parallel, rhythmic arrangement of a dozen or so seven-storey buildings housing six faculties, which dominated the one-to three-storey modular teaching and laboratory buildings. A semi-circular complex of nine 11-storey student dormitories closed the axis composition. The main public space was connected to the layout of the former airport roads, which were transformed into pedestrian paths. The concept introduced the principle of traffic segregation by placing streets and car parks on the outer edges of the campus.

¹⁸ Uchwała nr XXXI/398/07 RMK z dnia 19 grudnia 2007 r. w sprawie uchwalenia miejscowego planu zagospodarowania przestrzennego obszaru “CZYŻYNY – DĄBIE”. The plan was in force from March 14, 2008 to May 10, 2011, when it was invalidated by a judgment of the Supreme Administrative Court. *Unieważniony plan Czyżyny – Dąbie* [in:] BIP UMK, 14.03.2008, https://www.bip.krakow.pl/?dok_id=20092 (access: 10.07.2025).

¹⁹ Since 2020, a new local spatial development plan for Czyżyny Zachód, covering this area, has been in preparation, according to *Czyżyny Zachód – sporządzenie planu* [in:] BIP UMK, 19.11.2020, https://www.bip.krakow.pl/?dok_id=134528 (access: 15.07.2025).

²⁰ Zmiana Studium Uwarunkowań i Kierunków Zagospodarowania Przestrzennego Miasta Krakowa, Uchwała Nr CXII/1700/14 z dnia 9 lipca 2014 r.

²¹ The co-authors of the concept were Andrzej Gonciarz and Piotr Sagan: M. Karpińska, D. Leśniak-Rychlak, M. Wiśniewski (eds) *Witold Cęckiewicz*, vol. 2, *Socrealizm, socmodernizm, postmodernizm*. Instytut Architektury, Kraków 2015, pp. 68–69.

The first buildings constructed according to this concept were four CUT student dormitories, built between 1973 and 1974, based on a standard design by Prof. Tomasz Mańkowski²², together with a canteen (Kwadrat club) and a teachers' residence hall. In the southern part of the CUT area, a complex for the Faculty of Mechanical Engineering was built between 1974 and 1980, according to a design by Prof. W. Cęckiewicz, featuring a comb-shaped layout and a steel frame structure²³. It consists of two complexes arranged along a north-south axis. The first group includes four pavilions, one seven-storey and three three-storey, connected at the first-floor level by two glazed bridges and linked to the workshop hall. The second group comprises four low pavilions, two of which are connected to the sports hall. The economic crisis of the 1980s stopped further campus construction²⁴, and the remaining area was used as allotment gardens for university staff. These initial investments became the seed for the urbanisation of the area and the foundation for further growth after 1989, which proceeded independently in both parts of the campus. Still in the 20th century, three four-storey residential buildings belonging to the Politechnika Housing Cooperative were constructed in the immediate vicinity of the dormitories. Tennis courts were also built in both parts of the campus.

Further intensive development occurred with the beginning of the 21st century. In 2001, in the northern part, a single-storey office building for Pfaffenheim, designed by Studio S, was built near the existing building development and hidden behind a green wall. Another investment was the Akopol²⁵ Academic Housing Estate, constructed between 2001–2013 and 2016–2020, according to the urban and architectural design by Prof. Waław Seruga and Małgorzata Buratyńska-Seruga. The rectangular urban layout is a deliberately composed group of nine, four- to five-storey multi-family residential buildings, each forming a separate block with its own green spaces. Between 2021 and 2024, the spatially isolated and landscape-connected Cogiteon Małopolska Science Centre, designed by Heinle, Wischer und Partner, was built in the immediate vicinity of the former runway.

Since 1997, the Krakow Technology Park has been steadily developing in the southern part of the CUT campus, which was a strategic investment for both the university's growth and the city's economy. Detailed spatial frameworks for its development were prepared in 1998 under the direction of Prof. Aleksander Böhm and Prof. Krzysztof Bieda as a Coordination Plan²⁶. Its guidelines, only partially implemented, encompassed the entire CUT campus, defining land divisions, the spatial composition of building blocks and green areas, the circulation system, the functional programme, and the general principles of development and land use. The Coordination Plan also addressed the architectural quality, the form of the circulation routes conceived as avenues lined with tall greenery, and the harmonious character of the development with unified urban and architectural details²⁷.

Another prestigious and strategic proposal for both the city and the university was the Krakow Exhibition and Congress Centre, designed under the supervision of Prof. Waław Celadyn

²² M. Wiśniewski, *Budowanie świata. Wokół twórczości Tomasza Mańkowskiego*, Wydawnictwo EMG, Kraków 2022, pp. 171–173.

²³ M. Karpińska, D. Leśniak-Rychlak, M. Wiśniewski (eds), *op. cit.*, pp. 118–119.

²⁴ M. Wiśniewski, *op. cit.*

²⁵ Akopol is a company owned by the Cracow University of Technology.

²⁶ Plan Koodynacyjny zagospodarowania terenów Politechniki Krakowskiej w Czyżynach wraz ze Specjalną Strefą Ekonomiczną, msp., Kraków 1998, provided courtesy of Krakow Technology Park, author's archive.

²⁷ M. Wdowiarz-Bilska, *Park technologiczny jako element struktury przestrzennej miasta*, PhD thesis, Wydział Architektury Politechniki Krakowskiej, Kraków 2007.

between 2006 and 2007. The large-scale facility, planned along Stella-Sawicki Street, was to consist of four exhibition halls connected by a passageway, a multifunctional hall, a reception and conference area, as well as hotel and service facilities. It was one of a series of planned initiatives for the development of the campus, alongside new educational facilities and a swimming pool²⁸. In 2016, under the supervision of Prof. Elżbieta Węclawowicz-Bilska, an urban-planning concept for the entire CUT area was developed in the form of guidelines for a local spatial development plan²⁹. These guidelines introduced a new functional division, including the further development of the technology park and the university, the spatial integration of the entire campus area, zoning regulations based on building height, the optimisation of the transport and parking system, and the incorporation of greenery principles. In both this and the subsequent urban concept, the former runway remains an important compositional element of the campus, surrounded by greenery. The next urban-planning vision, “Politechnika 2100,” developed under the direction of Prof. Tomasz Kapecki between 2020 and 2022, presents future-oriented solutions for the campus, envisioning a park-like character. The high-rise, compact development planned along Stella-Sawicki Street is intended to provide acoustic insulation for the smaller-scale buildings surrounded by greenery and leisure spaces within the area³⁰.

The technology park, which has been under construction since the beginning of the 21st century along Życzkowskiego Street, is a clear and compact arrangement of forms, typically four to five storeys high. Its development follows the spatial layout proposed in the Coordination Plan. The diverse architectural expression of the individual office buildings, achieved by a variety of materials, colours, and details, creates a surprisingly harmonious space. The complex is full of distinctive buildings, such as the KPT Incubator (2008), designed by the Wizja and MoonStudio consortium. Its double-skin facade, with a delicate external layer of transparent louvers, creates a subtle, dynamic surface that responds to changing light conditions, lending the structure a lightness and futuristic character. A similar impression is evoked by the phenomenal, glazed form of the SSE6 building (2016), designed by Studio Jose Casquet and Buro Happold. It appears to float like a futuristic capsule above the raw steel structures of the data centre, providing a striking counterpoint to the coherent and understated architecture of the Comarch complex. Two further expressive and contrasting buildings Nautilus (2012) and Aquarius (2021), both designed by QArch, also contribute to the visual identity of the park. There are also several eco-friendly buildings implementing sustainable architectural solutions and holding LEED or BREEAM³¹ certifications. These include Aquarius, Avia (2015) designed by Ovotz Design Lab, SSE7 (2017) in the Comarch complex by Artur Jasiński i Wspólnicy, Cloudbox (2017) designed by UCEES, and Podium Park, constructed between 2017 and 2020, located directly beside the Faculty of Mechanical Engineering. This last development, consisting of two interconnected twelve-story towers, determined the spatial composition and, with its scale, overshadowed the previous dominant

²⁸ M. Wdowiarz-Bilska, Z.K. Zuziak, *Krakowskie uczelnie w przestrzeni miasta*, “Studia KPZK” 2008, no. 121, pp. 172–185.

²⁹ Czyżyny – Park Technologiczny – wstępna koncepcja zagospodarowania przestrzennego terenów PK, Kraków 2016, archive of the Department of Spatial Planning, Urban and Rural Design.

³⁰ L. Peters, *op. cit.*

³¹ LEED certificates were awarded to Aquarius with a “Platinum” rating and Avia with a “Gold” rating; BREEAM certificates were awarded to SSE7 with a “Very good” rating, Cloudbox with an “Excellent” rating and Podium Park with an “Outstanding” rating, Baza Budyneków Certyfikowanych PLGBC, <https://baza.plgbc.org.pl/building/> (access: 12.07.2025).

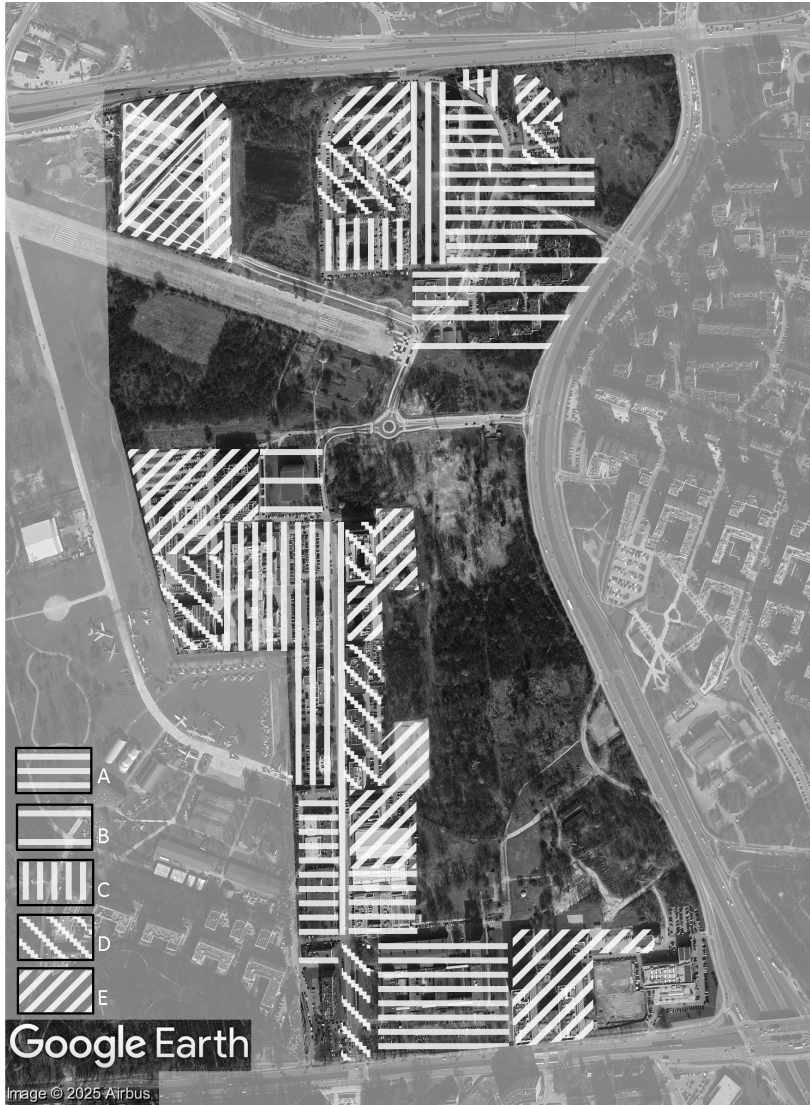
feature – the main Faculty of Mechanical Engineering building. Simultaneously, since 2016 three small-scale buildings housing the CUT's innovative laboratories have been constructed next to Podium Park. It is worth noting that both the immediate and more distant surroundings of the Faculty of Mechanical Engineering, despite being rich of greenery, remain hardly accessible, neglected and unadapted to the contemporary users' needs³².

3. CONCLUSIONS

Within the campus area, which has been developed successively, from both the north and south, three distinct urban forms are discernible. Despite fifty years of development, the area lacks integration, either internally or with its immediate surroundings. The spaces between individual building complexes are largely undeveloped, partially inaccessible, or overgrown with feral vegetation from former allotment gardens. The only unifying element in this area is the former runway, but, due to its fragmentation and lack of connections with the built environment, it does not function as an element of the public-space network. The northern part of the CUT campus consists of diverse sets of development, shaped by varying urban-planning guidelines, compositional intentions, functions, architectural forms, and styles. It comprises distinct, yet compositionally homogeneous, complexes. However, thanks to its aesthetic values, this diversity does not contribute to a lack of integration and spatial harmony across the northern campus as a whole. The presence of more or less landscaped greenery, especially mature trees, separating the building clusters, also helps to soften the architectural contrasts. The insufficient transport and pedestrian links create a sense of spatial chaos. The southern part of the campus, in contrast, is more developed and unified, forming a compact and harmonious functional ensemble. However, the extensive parking areas surrounding it constitute a visually unfavourable element. The tall and ornamental greenery, along with small semi-public spaces, provides an attractive backdrop and serve as a bridge between 1970s modernist architecture and contemporary design.

The current space of the campus is the result of both municipal policies and the university's development strategies, as expressed in urban-planning concepts prepared under the guidance of CUT Faculty of Architecture's professors as well as the financial resources available for their implementation. It should be emphasised that this outcome is a mosaic of fragmented interventions, as neither the city's nor the university's plans have ever been fully implemented. The present-day form of the CUT campus is the cumulative result of individual investments. The greatest challenge in its further development is the creation of public or semi-public space that will integrate the campus as a whole. Such space – conceived as a pedestrian corridor enriched with greenery, squares, pocket parks, and other elements – should become a top priority for the university in the context of further development. Achieving this will require a detailed spatial framework to organise and co-ordinate the area's future growth, accessibility, and internal connectivity. A coherent vision defining the method of delimiting and implementing public space will allow for the creation of a campus with a clear identity, good connections, and high-quality functional and spatial solutions.

³² K. Hodor, T. Jaróg, *Contemporary spatial problems of campus spaces and the methods and potential of their activation: based on the case of the Cracow University of Technology Czyżyny campus*, "Geomatics, Landmanagement and Landscape" 2023, no. 4, pp. 195–209.



III. 1. Spatial transformations the CUT area in Czyżyny: A – development until the mid-1980s, B – extension up to 1995, C – development 1995–2005, D – development 2005–2015, E- development 2005–2015, source: own study on the background Google Earth.Airbus.2025



Ill. 2. Faculty of Mechanical Engineering main building, photo: author



Ill. 3. Faculty of Mechanical Engineering building – internal courtyard, photo: author



Ill. 4. Podium Park and new university laboratories with the Faculty of Mechanical Engineering building in the background, photo: author



III. 5. University sport centres with technology park development, photo: author



III. 6. Office building in technology park: Aquarius, Nautilus and Technology Incubator on the left, Copernicus Centre on the right, photo: author



III. 7. Comarch complex – SSE 6 building on the right, photo: author



Ill. 8. Neglected runway surroundings with a view of the Akopol Academic Housing Estate, student dormitories and the Kwadrat club, photo: author

References

- [1] Baza Budynków Certyfikowanych PLGBC, <https://baza.plgbc.org.pl/building/> (access: 12.07.2025).
- [2] Czyżyny – Park Technologiczny – wstępna koncepcja zagospodarowania przestrzennego terenów PK, Kraków 2016, archive of the Department of Spatial Planning, Urban and Rural Design.
- [3] *Czyżyny Zachód – sporządzanie planu* [in:] BIP UMK, 19.11.2020, https://www.bip.krakow.pl/?dok_id=134528 (access: 15.07.2025).
- [4] Hodor K., Jaróg T., *Contemporary spatial problems of campus spaces and the methods and potential of their activation: based on the case of the Cracow University of Technology Czyżyny campus*, “Geomatics, Landmanagement and Landscape” 2023, no. 4, pp. 195–209. DOI: 10.15576/GLL/2023.4.195.
- [5] Karpińska M., Leśniak-Rychlak D., Wiśniewski M. (eds), *Witold Cęckiewicz*, vol. 1, *Rozmowy o architekturze*, Instytut Architektury, Kraków 2015.
- [6] Karpińska M., Leśniak-Rychlak D., Wiśniewski M. (eds), *Witold Cęckiewicz*, vol. 2, *Socrealizm, socjodernizm, postmodernizm*, Instytut Architektury, Kraków 2015.
- [7] Łasocha M., Jaśkiewicz M., Kuzianik R., *Profesor Zygmunt Ziobrowski: Życie poświęcone przestrzeni*, “Teki Komisji Urbanistyki i Architektury w Krakowie” 2024, no. 1, pp. 387–410.
- [8] Mikulski M., *Z historii krakowskiego cywilnego portu lotniczego Rakowice-Czyżyny*, “Kwartalnik Historii Nauki i Techniki” 1972, no. 1, pp. 89–106.
- [9] Peters L., *Plan dla Czyżyn: łączenie potencjałów*, “Nasza Politechnika” 2022, no. 6–8, pp. 2–7.
- [10] Plan Koordynacyjny zagospodarowania terenów Politechniki Krakowskiej w Czyżynach wraz ze Specjalną Strefą Ekonomiczną, msp., Kraków 1998.
- [11] *Plan ogólny Miasta Krakowa 1967 – nieobowiązujący* [in:] BIP UMK, 7.02.2012, https://www.bip.krakow.pl/?sub_dok_id=49205 (access: 7.07.2025).
- [12] *Plan ogólny Miasta Krakowa 1977 – nieobowiązujący* [in:] BIP UMK, 7.02.2012, https://www.bip.krakow.pl/?sub_dok_id=49206 (access: 7.07.2025).
- [13] *Plan ogólny Miasta Krakowa 1988 – nieobowiązujący* [in:] BIP UMK, 7.02.2012, https://www.bip.krakow.pl/?sub_dok_id=49207 (access: 7.07.2025).
- [14] *Plan ogólny Miasta Krakowa 1994 – nieobowiązujący* [in:] BIP UMK, 7.02.2012, https://www.bip.krakow.pl/?sub_dok_id=49209 (access: 8.07.2025);
- [15] Program Sporządzania Miejscowych Planów Zagospodarowania Przestrzennego, UMK, Kraków 2003.

- [16] Rzegocińska-Tyżuk B., *Współczesne realizacje dla szkolnictwa wyższego w przestrzeni Krakowa*, "Studia KPZK" 2008, no. 121, pp. 350–359.
- [17] Środulska-Wielgus J., Wielgus K., *Park Lotników Polskich. Od zieleni fortecznej i lotniska Rakowice-Czyżyny do Lotniczego Parku Kulturowego*, Ośrodek Kultury im. C.K. Norwida, Kraków 2019.
- [18] Uchwała Nr VII/58/94 Rady Miasta Krakowa z dnia 16 listopada 1994 r.
- [19] Uchwała nr XXXI/398/07 Rady Miasta Krakowa z dnia 19 grudnia 2007 r. w sprawie uchwalenia miejscowego planu zagospodarowania przestrzennego obszaru "CZYŻYNY – DĄBIE".
- [20] *Unieważniony plan Czyżyny – Dąbie* [in:] BIP UMK, 14.03.2008, https://www.bip.krakow.pl/?dok_id=20092 (access: 10.07.2025).
- [21] Wdowiarz-Bilska M., *Park technologiczny jako element struktury przestrzennej miasta*, PhD thesis, Wydział Architektury Politechniki Krakowskiej, Kraków 2007.
- [22] Wdowiarz-Bilska M., Zuziak Z.K., *Krakowskie uczelnie w przestrzeni miasta*, "Studia KPZK" 2008, no. 121, pp. 172–185.
- [23] Wiśniewski M., *Budowanie świata. Wokół twórczości Tomasza Mańkowskiego*, Wydawnictwo EMG, Kraków 2022.
- [24] Zmiana Studium Uwarunkowań i Kierunków Zagospodarowania Przestrzennego Miasta Krakowa, Uchwała Nr CXII/1700/14 Rady Miasta Krakowa z dnia 9 lipca 2014 r.

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