



University of Pécs (Hungary)

Green University Program

Sustainability report

2021





Content

| | |
|--|----|
| 1. Mission | 2 |
| 2. About the University of Pécs | 3 |
| 3. Results | 6 |
| 3.1. Results of environmental responsibility | 6 |
| 3.2. Results of social responsibility | 14 |
| 3.3. Results of economic responsibility | 19 |
| 4. Conclusion | 20 |
| 5. Reference | 21 |

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1. Mission

The University of Pécs (UP) launched its Green University Program in 2016. The mission of the program is the encouragement of all innovations, good practices, initiatives and local policies regarding environmental sustainability; and furthermore, to shape and strengthen ecological awareness by the means of science and education. This wide ranging program serves as a foundation for the implementation and if necessary – in this rapidly changing world that is filled with challenges – for the correction of the University’s sustainability strategy.



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2. About the University of Pécs

Pécs is a friendly, attractive city that is not only welcoming university students and their families but also serves as a home to them. The University is a significant institution of the city, to which – in addition to the students – almost all citizens are strongly related. The high number and diversity of international students together with the Mediterranean ambience make Pécs a pleasant, busy University town that is full of life.

The University of Pécs with its 22,000 students, 1700 professors and researchers, and 10 faculties is one of the largest higher education institutions of Hungary and the knowledge centre of the Transdanubian region. Its roots go back to 1367. The UP represents classical values, while also successfully adapts to the challenges of our times and to those of the future. Covering a wide range of educational fields, it reaches far beyond the city of Pécs. The UP has a faculty in Szekszárd and is organising significant training programs in Kaposvár, Szombathely, Zalaegerszeg and what is more, in Zombor, Serbia as well (Figure 1.).

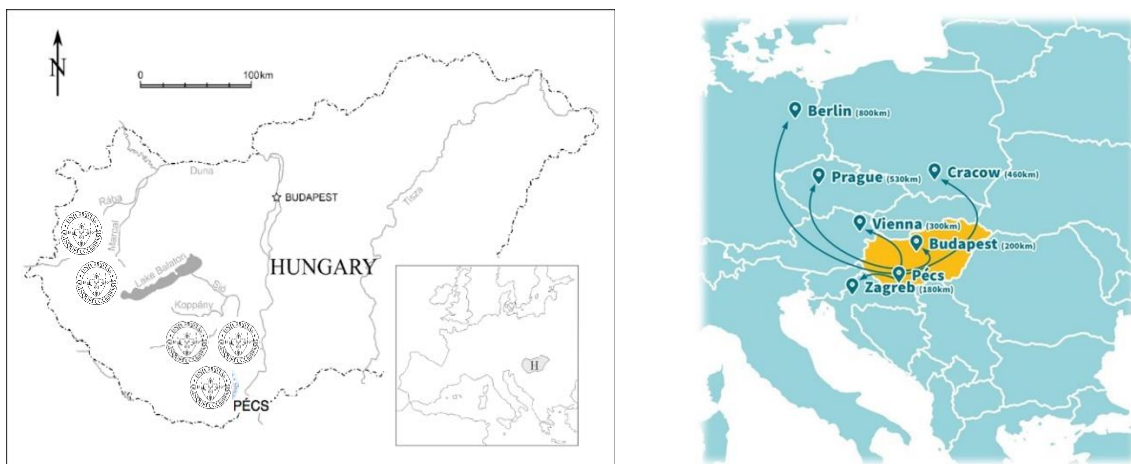


Figure 1. Location of the UP campuses and Pécs

In 2021, the Expert Committee of Superbrands Hungary, consisting of independent specialists, found the University of Pécs worthy of wearing the Superbrands 2021 trademark (Figure 2.). Superbrands is a trademark symbolizing high quality, within the framework of which the best consumer and business brands are awarded [1].



Figure 2. University of Pécs – Superbrands 2021

The nearly 300 training programs offered by the UP cover practically all areas of science and arts. Due to the wide-ranging profiles of the faculties, the academic activity of the university is extremely extensive, multi-layered and diverse. These include medicine, life sciences, natural sciences, humanities and social sciences, as well as fine arts, applied arts and music. 21 doctoral schools are operating at the university faculties, which cover a wide spectrum of science and arts. The University of Pécs attributes an important role to talent management. The aim of the colleges for talented students and student circles is to support the scientific work of students.

The reputation and popularity of the university is increased by the foreign language courses, summer schools, the various scholarship programs, and the talent nurturing workshops, which attract a significant number of foreign students. UP provides a high-quality training also in foreign languages, in all scientific fields, the international recognition of which is clearly indicated by the fact that students from 114 countries study in Pécs.

The UP was among the first to join the European Digital UniverCity (EDUC) project, working within the EDUC alliance on reforming European higher education since 2019. The UP has 392 inter-university agreements in 30 European countries. These partnerships make it possible through various scholarship programs for the university to receive hundreds of European students annually, as well as sending professors and students of the UP to our partner universities.

The UP has created several partnerships throughout Europe and outside the continent as well, from North-America to Australia. These include exchange programs for students and professors, scholarships, joint training programs, and dual diploma programs [2].

The University of Pécs is one of the most significant research centres of Hungary, with a huge professional research base. The János Szentágotthai Research Centre is home to numerous research areas of natural and medical sciences. The Research Centre was given the title ‘Excellence Research Center’ by the Hungarian Academy of Sciences (MTA) acknowledging its exceptionally high-quality scientific work [3].

The University of Pécs Clinical Centre is one of the largest health institutions of Hungary. Its threefold action include healing, education and scientific research. With its 29 patient care units and nearly 3,000 employees, the institution has been providing health care to the population of the entire region for several decades, and is also an active participant in the practical education of medical students and health professionals. The clinic works in close cooperation with both the Medical School and the Faculty of Health Sciences, combining high-quality knowledge with modern healthcare methods [4].

The UP Clinical Centre received a Family-Friendly Hospital Innovation Awards for their aspirations to improve the mental, physical and social well-being of its employees during the COVID-19 pandemic [5].

The University of Pécs, since 2021, is run by a foundation in accordance with the new higher education model. The foundation provides education, talent nurturing, research and other public services. As a strategic partner, the state offers long-term financing guarantees to ensure that these public services are carried out up-to-date by the UP [6].



Spectacular development is being carried out at the UP within the Modern Cities Program. It includes not only the construction of new buildings and the reconstruction of the old ones, but also the training of human resources in parallel with this [7].

Educational and health services related to the UP's activities have a significant impact on the environment. In order to mitigate the extent of the effects and adapt to environmental changes, the University of Pécs focuses on creating sustainable educational and health services and on ensuring sustainable operation. One important measure of university aspirations is the UI GreenMetric World University Rankings. The results achieved in this and the currently ongoing infrastructural developments provide the UP with the opportunity to realize sustainability not only in its operations and university-related services, but also in the internal and external natural, social and economic environment connected to the university. The fact that more and more foreign students are involved in sustainability education and joint projects also plays an important role in this.

3. Results

3.1 Results of environmental responsibility

The UP, despite the difficulties caused by the pandemic, has achieved significant national and international success in the field of environmental protection and sustainability. Not only were the UP's local and regional aspirations for reduction, adherence and awareness raising successful, but the achieved results also received great social acceptance. This is demonstrated by the fact that the UP won the title of 'Bicycle Friendly Workplace' in the public institution category of the 'Bicycle Friendly Settlement and Bicycle Friendly Workplaces' program of the Ministry of Innovation and Technology (MIT). The University participated in the mobile phone collecting event called 'Pass it back Bro' as an action of waste management; moreover, it has received a Communication Special Award for its regional school campaign. The events organized by the UP in the framework of the European Week of Waste Reduction were once more ranked by the MIT as the most outstanding aspiration in the category of educational institutions.

In 2021, the UP has participated in the international program of ‘UI GreenMetric World University Rankings’ for the sixth time and finished among the leaders of the world’s green universities, on the 42nd place [8]. With this result it is the first among the Hungarian universities and it reached a high ranking within Central Europe as well. Its exemplary role in higher education further obliges the UP to continue and advertise its results, as well as to contribute to the sustainability efforts of Hungarian universities (Figure 3).

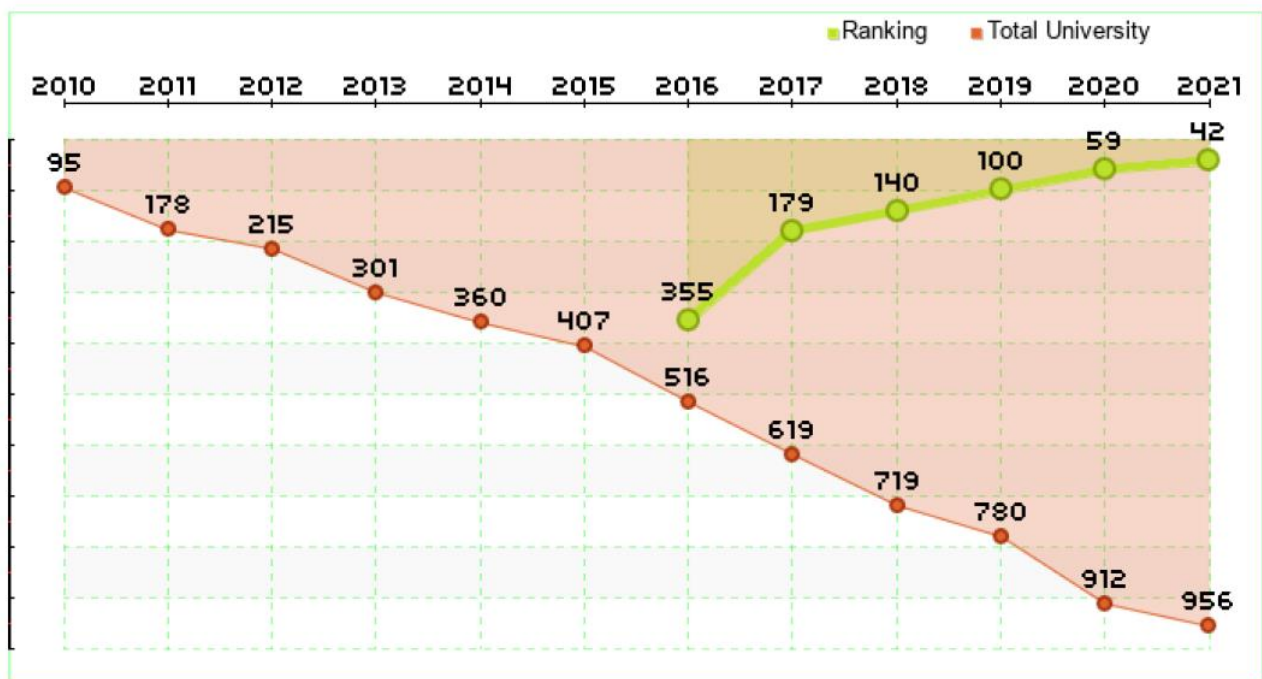


Figure 3. Positions of University of Pécs in the UI GreenMetric World University Rankings

Serious efforts were made in order to achieve these results, such as the implementation of the plastic bottle free university concept, the usage of renewable energy resources, the enhancement of the electric car fleet, the growth of the ratio of smart building, the extension of selective waste collection and the utilization of water-efficient solutions. Furthermore, the number of courses and researches dealing with sustainability has increased, and there is great emphasis on individual and common awareness-raising.

The University of Pécs established the process of national and international networking. It serves as a national coordinator in the UI GreenMetric World University Rankings Network.

The Green University Program of the University of Pécs, as the coordinator of the V4 Green Universities (V4GU) project supported by the International Visegrad Fund, aims to establish closer international cooperation between the universities of Visegrad and other neighbouring states participating in the project, regarding the development and implementation of their climate protection programs. The purpose of the cooperation of the universities in the joint ranking is to share knowledge and implement joint efforts in Central Europe in the fight against climate change through the UI GreenMetric World University Rankings network. The UP successfully put into effect the joint video campaign of the V4 Green Universities aimed at awareness-raising, the main message of which was the following: ‘what would you do differently at the UP, in order to create a more environmentally aware, more energy-efficient and healthier lifestyle’. In 2021, the UP organized, for the fourth time, a Green Workshop, where 33 representatives of 12 Hungarian universities participated, providing a possibility to share good practices in the field of sustainability, and to map possible joint actions [9].

In order to build the UP brand, the University participated in the Planet Budapest 2021 Sustainability Expo and Summit (Picture 1). The participants got to know not only the UP’s climate and environmental protection and sustainability initiatives, but also the institution and the city itself. Another goal of the presentation, in order to enrich the UP’s enrolment portfolio, was to show, under the umbrella of the Green University Program, why it is good to study at the UP, what research areas are there that may arise from the point of view of students' career building, and those that also represent a value for companies [10].



Picture 1.: The UP – the Planet Budapest 2021 Sustainability Expo and Summit

Representatives of Hungarian universities expressed their wishes to create a common platform, providing a possibility to share good practices in the field of sustainability regularly, for organizing joint actions and to build tighter partnerships. Based on this, the University of Pécs contacted other Hungarian universities engaged in sustainable development in order to take joint action for the implementation of the UN's 17 Sustainable Development Goals, and furthermore to sign a Framework Convention in this regard. UP is striving to open a Sustainability Platform for Hungarian Universities as a space for thinking together and for the coordinated sharing of good practices.

UP supports those technologies, services and consumer habits that aim to reduce the use of natural resources, realizing decarbonisation goals. For instance, the University's project called 'Lungs of the City' that was entered for the international higher educational competition for innovative house-building, Solar Decathlon Europe 2021, aimed at creating an urban living space that has a positive effect on the environment. The project constructed its sample house demonstrating sustainability, based on the UP's renewable energy resources, in a little more than two weeks (Picture 2). It goes far beyond the architectural aspect: the energy-plus building that has zero or negative emission puts great emphasis not only on ecological sustainability and awareness, but also on social responsibility [11].



Picture 2. : „Lungs of the City” – Solar Decathlon 2021

In order to mitigate the environmental load, the university aspires to mitigate its carbon footprint, while keeping in mind the nature's and the university's interests at the same time. Recently, the university has consciously formulated its mitigation efforts, which are in line with the decarbonisation goals of the 'Second National Climate Change Strategy' [12]. The first main step of the University's decarbonisation strategy is to exchange fossil fuels with renewable energy resources. The ratio of renewable energy resources used by the UP has been constantly increasing since 2016. More than 50% of the entire energy usage of the University is covered by renewable sources, of which biomass has the largest proportion, thanks to the change to a biomass-based heating system. Biomass is followed by geothermal and solar energy. Hungary has set the goal of becoming completely climate neutral by 2050, thus serious energy and climate policy decisions had to be made. As a part of this, a 304 billion HUF project has been launched at the University of Pécs, together with ten other consortium partners. This is the National Laboratory for Renewable Energies, where research is conducted focusing on hydrogen technologies and the utilization of carbon dioxide [13].

Drought causes huge problems all over Hungary. A Citizen Science network has been launched in 2021 with the participation of researchers of the UP, developing a smartphone application called DRYRivERS, through which citizens can help collecting data in order to protect our small streams (Picture 3.).



Picture 3.: DRYRivERS app

The ratio of fossil fuels also decreased in the operation of the University's car fleet by the enlargement of the number of electric cars. The vehicle fleet, that is operated primarily in Pécs, plays a prominent role in the movement of goods and passengers between the institution's locations, significantly reducing the UP's traffic-related carbon dioxide emissions.

The number of bicycle stands on the UP's campuses is increasing year by year, the utilisation of which is also growing in parallel with the expansion of the urban bicycle road network and the connectedness of the campuses.

The second main step of the University's decarbonisation plan is to increase energy efficiency and energy saving. As part of this, many university buildings were energetically renovated. The University of Pécs was the first among Hungarian universities to join the Virtual Power Plant Program (VPPP) that was declared, by the European Union, to be one of the three best sustainable development-themed energy efficiency programs. Furthermore, as a founding member, it established the Baranya Virtual Power Plant Program (BVPPP), the aim of which is to contribute to a regional concordance on sustainability, to encourage individuals, families, businesses and NGOs to make their decisions and support initiatives based on such values that can secure the region's sustainable development in the long run. In connection with BVPPP, the University of Pécs was awarded in 2021, for the second time, the Energy-Efficient Mentor Award. The BVPPP mentor-role was extended with two other fields: operating as a mentor institution for the Virtual Landfill Program in the area of waste management, and for the Virtual Health Centre on the field of health preservation. As a result of the BVPPP cooperation, sustainable development and climate protection took a huge step forward in the city of Pécs.

In 2022, Pécs was also selected by the European Commission as part of its mission to achieve climate neutrality, in which 100 European cities participate (TOP 100 cities: Pécs on the road to climate-neutrality) [14]. Therefore, it is in the elementary interest of both the city and the University to cooperate in order for the University, which plays an important role in the life of the city, to become an experimental and innovation centre.

The visibility of the University’s green developments was helped by the fact that a plotting board was exhibited as part of the Ecocity week, which presented the ‘green’ infrastructure and developments of the University of Pécs and of the city, with the help of augmented reality (Picture 4.). Visitors were able to watch the virtual material via a smartphone application with the help of QR codes [15].



Picture 4.: Green AURA project - Ecocity week

The University is making mitigation efforts regarding its waste management as well, in order to decrease the amount of waste generated at the UP. It cancelled the procurement and distribution of plastic bottled beverages three years ago, and a water dispenser network was created, with numerous dispensers in the university campuses and institutions. Another priority is to reduce the amount of communal waste and to increase the selection of recyclable waste that is supported by the selective waste collection in all buildings of the University. A new selective waste collection system is being introduced, along with the creation of a new uniform image, which is an integral part of the institutional waste management policy.



The demand for paper-free office has been strengthening during and since the pandemic, for which the University could give innovative answers. It made huge efforts for the implementation and smooth work of the home office system, digital and hybrid education and examination. In order to achieve its goals, the University realized the previously planned conferences, festivals, courses, actions, and programs by altering to online events. To support this, a Digital Education and Learning Support Centre was established, which helps with the transition to digitalisation.

The UP increases the capacity of its natural carbon dioxide sinks around the University in order to enhance the results of decarbonisation. When it comes to infrastructural developments, ‘greening’ plays an important role, so during the construction of the new theoretical block of the Medical School, the 10,000 m² inner park was renovated, increasing the amount of carbon dioxide absorption in the urban space (Picture 5.).



Picture 5.: The park of the Medical School of the UP

The integration of the topic of sustainability into courses is becoming more and more important in higher education. We can find horizontal topics of sustainability in each and every faculty of the UP. Without being exhaustive, the subjects of intelligent environmental technologies, 3D technology, renewable energy, climate-conscious architecture, the circular economy, and sustainable material and energy management can be found.

At the University of Pécs, especially active research is conducted on the fields of health and medical, life, human and social sciences and arts, however, more and more emphasis is put on research connected to sustainability. Some of the most important research topics are: root zone wastewater treatment systems; extensive green roof; storm water retention; examination of building energy and acoustic comfort aspects; secondary fuel production process from municipal solid waste; development of hydrogen technologies and fuel cell equipment suitable for storing weather-dependent renewable electricity; water policy and water diplomacy, as well as research related to various medical and pharmaceutical sciences.

3.2 Results of social responsibility

Social acceptance of the achievements in environmental protection and sustainability are proven by the Green University Program gaining a greater role in the operation of the University and the improvement of the UP brand. The aim of the UP Green University Program is to preserve the achievements and implement new projects. The results can only be successful if university students think of adherence as a possibility and strive to participate actively in the programs. The role of UP in awareness raising is significantly growing right now.

The UP Green University Program serves as a catalyst for green innovations that aim to implement sustainable development goals. The ‘green idea’ is horizontally present in almost all areas of life, therefore it is important to exploit the synergies that strengthen and shape the individual's thinking through complementary and supportive programs, and make ‘green action’ an almost subconscious part of everyday life.

But what is it that green idea means for us? Self-conscious protection of the environment and the mitigation of the environmental load caused by humans can contribute to the improvement of the quality of life and the well-being of people. Environmental awareness and the conduction of such a lifestyle is partly based on inner motivation, but it is also a form of behaviour turned



into action. While a conscious decision on the part of the individual assumes openness and a sense of responsibility, on the part of the decision-makers, in addition to openness, will is the most important factor. Turning environmental awareness into action depends on several factors, but basically it means creating the possibility and providing an alternative, so that employees, professors and students of the university have the chance to act responsibly and conduct a (more) environmentally friendly lifestyle. This includes consistently putting into effect environmental awareness in regard to transportation, energy usage, waste management, water usage, the relation between men and nature, the environment of the university campuses, operation, maintenance and cleansing, consumer awareness and sustainable consumption, alternative eating possibilities, and to the environmental load of teaching and administration. One of the most important elements of creating and developing environmental awareness is changing thinking patterns, viewpoints, attitudes, behaviours, forming individual and group attitudes, receptiveness and sensitivity to detecting environmental problems, and implementing environmental aspects. Environmental awareness is a moral conviction that can make people broaden their knowledge and moreover it is capable of turning an approach into action.

The University of Pécs believes social responsibility to be important in order to increase the social acceptance of the results achieved so far, and also to create a sustainable operation. The social responsibility of the UP is to all university students, professors and employees and to the citizens of Pécs. The University has been awarded the title ‘Responsible Employer of the Year 2019’, furthermore it won for the second time in 2020 the title ‘Family Friendly Workplace’, as well as the title ‘Disability-Friendly Workplace 2020’. It is a priority for the University to provide space for the expansion of international relations, and moreover, for the scientific progress of women and the underprivileged.

The UP is using every educational and other, practical methods to fulfil its social responsibility towards students, employees and the citizens. Professors and employees of the University give presentations and are trying to educate and raise the awareness of each and every age group from the little ones to the elderly as well, in order to bring science closer to everyone and make it more understandable. From 2021 on, with an awareness-raising aim, scientific and informative courses are being launched at the University that anyone can register for. The UP aspires to take the green idea to as many people as possible with this.

Demola is an innovative platform, connecting students with businesses – the UP joined this international network in 2019. The University created a challenge called GreenIdea, the project team of which was culturally and scientifically quite diverse. In connection with Demola, students could learn how can they be more organized, effective and creative in their everyday life and in their jobs.

The University organized numerous awareness-raising actions within the Green University Program in several sectors, including energy usage, transportation, waste management and water management. These actions (e.g. promotion of bike riding, garbage collection, dress up green, collection of waste oils and used mobile phones) were partly initiatives of the UP, and partly related to national and global actions (Picture mix). The most important programs connected to awareness-raising, such as the package free shopping, conscious consuming, non-smoking lifestyle, healthy, vegetarian or vegan eating habits, quizzes and board game events and their results are all listed on the website, Facebook group and Instagram page of the Green University Program [16].



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BIZTONSÁGI
PÁLYÁK
09.22.

Fontos a véleményed
online kérdőív
09.16-22.

Autómentes Pécs

további információ:





Picture mix: Some actions of Green University Program of the UP – snapshots

3.3 Results of economic responsibility

The University of Pécs aspires to be a redefined knowledge centre, an excellent research university and a centre for innovation. Besides strengthening its position as a research university, the University of Pécs aims to be a defining innovation centre in the wider region. In order to reach this goal, the UP strives to expand its national and international network not only to the scientific institutions and universities, but also to as many actors of the economy, as possible.

The University of Pécs, as the coordinator of the tender called Green AURA, supported by the Interreg V-A Hungary – Croatia Co-operation Programme, has undertaken to present the climate protection-related developments and research areas of the city of Pécs and the UP with an augmented reality-supported exhibition installation to the students and employees of the University, the citizens of Pécs, as well as for any other visitors. During the creation of the content of the exhibition, the local utility service providers were also involved.

The most important goal of the Cleantech and Green Economy Research and Innovation Centre project is to create a strategic, interfaculty, interdisciplinary, independent organizational unit that institutionalizes the support of long-term and sustainable corporate-higher education collaborations that increases Hungary's competitiveness based on the accumulated research and development capacity of the University of Pécs in the fields of technical, natural sciences, business and economic development. The aim is to establish market-based research, development and innovation capacity at the University of Pécs within the framework of a competence center in the fields of hydrogen economy, recycling of construction and technological waste, development of alternative raw materials and products, as well as machine industry 4.0 / environmental design and machine manufacturing technology development.

The objective is to develop an innovation culture at the university. Years ago, the University of Pécs recognized that the preservation and utilization of the university's knowledge assets – in addition to education and research – is an important task of a scientific university, and therefore it developed the necessary framework for this already in 2005. It won a grant to build and strengthen the university-centred innovation ecosystem. In the innovation ecosystem, the university plays the role of the central catalyst, but in addition to the city, the region's micro,



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