Hungary's second largest city **Debrecen**

A Vibrant Scientific Center

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Hungarian PM

Ferenc Gyurcsány

Scientific Excellence Based on Common Knowledge

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ESS Times Hungary

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DOMESTIC AFFAIRS

Europe's Competitiveness at Stake

Maintaining Europe's competitiveness in research and development (R&D) is crucial; therefore constructing the ESS shall wait no longer in face of the recent leap in American and Japanese neutron research presents. It is not only Hungary that benefits from establishing the ESS in Debrecen, the entire European Union can fulfill the fifth freedom, the free movement of knowledge. It can be clearly seen, that in the region of Central Europe, there is a long tradition in what we nowadays call material science. The new facility will not only bring a strong innovative capability in the region. This will, in turn, attract new economic activities and influence the overall growth of the region, with a positive socio-economic impact, integrating the region's R&D capacity into the circulation of all of Europe. Developing Europe's competitive edge effectively can only come about through the dynamic contribution of all parts of the continent.

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EDITORIAL

Europe happens to be preparing one of the world's most significant scientific developments, which will define progress within the natural sciences for decades to come. ESS is in itself a guarantee for preserving the undeniable European edge in neutron research, as well ensuring that the Hungarian knowledge base that made the very construction of ESS possible remains on the continent.

At the same time, we also have a great opportunity to shed light on the significance of ESS in front of millions of European citizens, not only a narrow scientific community. The most important message thet construction of the ESS carries for Europe is that an evenly developing Europe may also have a knowledge base that stretches evenly. Europe can only remain in balance if knowledge – the most important capital nowadays – is not concentrated in one spot but attempts bridge the gap that exists in many areas between older and newer member states.

The next few pages will present numerous economic, scientific and political arguments explaining why Debrecen will be the most advantageous location of this remarkable scientific establishment. Please, allow me to also share with you a subjective, very Hungarian argument. With the construction of the ESS in Debrecen, spallation technology would return home, to Hungary where the great scientist of this field and age, Professor Ferenc Mezei began his scientific career, and where the themes of physics and natural sciences have traditionally been part of our national heritage.

Hungary is ready to receive the ESS, and is resolute that Debrecen will be the ideal home for this research base.

Edit Herczog MEP
President of the ESS National Council

EXCLUSIVE

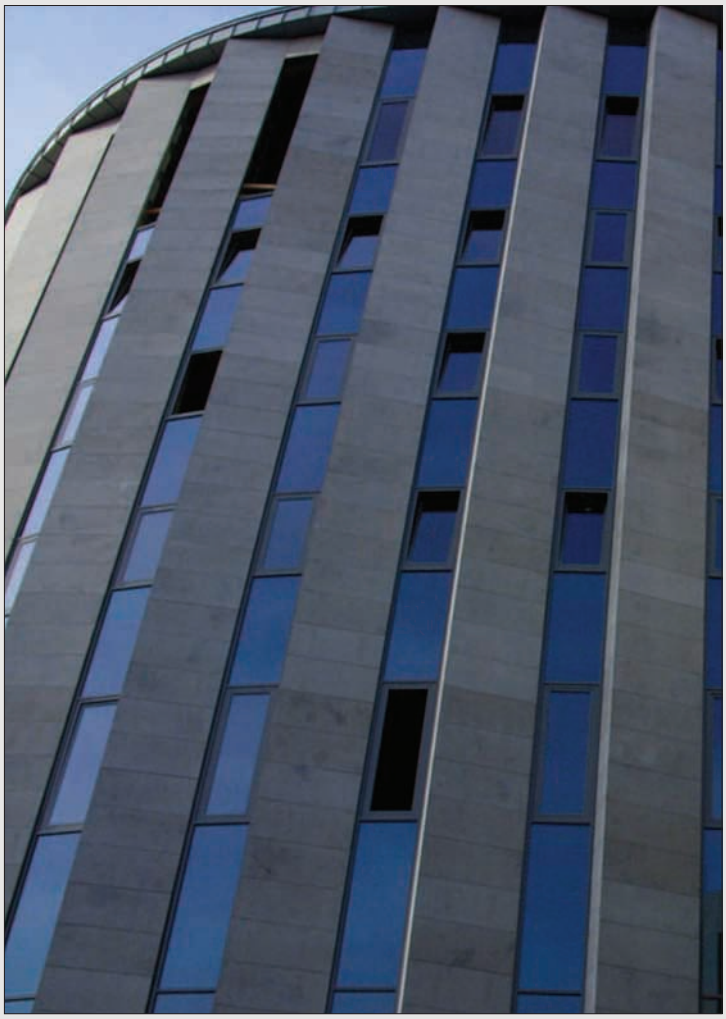
SCIENTIFIC EXCELLENCE BASED ON COMMON KNOWLEDGE

Europe strives toward turning the Union into the world's best developed and most competitive knowledge-based community. Now, when the world – including Europe – faces the gravest economic crisis of past decades, it is imperative that we not only utilise our existing scientific assets effectively, but that we also expand them, and we draw upon our research achievements to serve growth. This is the aim of constructing the ESS as well, one of Europe's most significant scientific infrastructure developments. Applying an important policy principle is also closely related to the ESS development plan: the European Union always made it a high priority to help the integration of new members into the rest of Europe be as complete as possible. Consequently, it is of increased importance not only for Hungary and Central-Eastern-Europe but also for the entire European Union that such a new, large scale scientific development be completed in a new member state. Establishing the ESS in Central-Eastern Europe has the full political support of the region's nations, and the entirety of the Hungarian political, scientific and economic community is unified behind this cause. On behalf of the Government of the Republic of Hungary, I secure my full support for the development of this facility in Debrecen.

Ferenc Gyurcsány
Prime Minister of the Republic of Hungary

TOP 5

REASONS IN SUPPORT OF THE ESS BEING BUILT IN DEBRECEN



Our readers can now decide where the scientific basis for Europe's competitive edge should be built. We will help you decide. Why should the ESS move to Debrecen?

- **EVERY MEMBER STATE OF THE EUROPEAN UNION BENEFITS**
  Constructing the ESS in Debrecen will enhance scientific, economic cooperation across Europe and extend the base for advancing European competitiveness.

- **THE NECESSARY RESEARCH BASE ALREADY EXISTS**
  The Hungarian Academy of Sciences has been operating its Nuclear Research Institute (ATOMKI) in town for the past 50 years. With Professor Mezei, spallation technology would return home to Hungary.

- **HUNGARY IS DEDICATED**
  Not only the scientific community, but the government, the opposition and the non-profit sector also supports it construction.

- **IT'S COST EFFICIENT**
  In comparison with competitors, the costs of the development would be lowest in Hungary, therefore the investment return time the shortest.

- **THE HIGHEST QUALITY OF LIFE FOR RESEARCHERS CAN BE ACHIEVED HERE**
  Besides wages guaranteed to be high, this is where scientists can achieve the highest quality of life compared to other bidders.

INTERVIEW

Debrecen Meets Every Condition For Exceptional Research Results

Interview with Professor Ferenc Mezei, Scientific Director, ESS Hungary

The ESS to be established will be based on your research, wherever it is built. Is it patriotism then that prompts you to fight so hard for Debrecen, Hungary?

Debrecen is the most suitable site for constructing the ESS. The professional and scientific environment is exceptional in Debrecen, neutron research in Hungary is of high level and builds on a tradition of many decades. The necessary high quality infrastructure and services in Hungary are very cost-effective. Debrecen offers a dynamically developing, favorable environment and high quality of life with lower costs of living. In addition, the ESS Consortium can offer the international staff of the Debrecen ESS very appealing salaries, through which we can attract the world's best scientists to Debrecen. The Hungarian banking system also allows everybody to manage their income in the currency of their choice. Furthermore, Debrecen also offers a high quality of life for employees' families, with schooling in several languages, international high school diplomas for their children, and an advancing international environment that offers attractive employment opportunities for spouses.

The huge savings Debrecen offers will probably not be spent purely on salaries. Will they be able to manage their finances in order to increase Europe's competitiveness in neutron research?

If the ESS is established in Debrecen, we can save about 250 million Euros in conventional facilities and services, which is a lot of money. In light of the American and Japanese challenge, it is imperative that the ESS be built as soon as possible and that European neutron research develops continuously, thus carrying on with the modernisation of the ILL, which is the current flagship of European neutron research. The total productive capacity of the ESS will only be reached by 2022-2024, and only then can it completely take over the flag from the ILL. The professional development of neutron research should therefore be improved simultaneously with the added expenses of constructing the ESS. This can be best facilitated by the Debrecen solution.

SCIENCE

Recent Hungarian Research Findings Known Across the World

Almost everyone knows that the transformer, the ballpoint pen, fusion energy, the lunar module, tomographic tests, or the hologram were inventions of Hungarian minds. But what are some of the newer Hungarian findings that can soon be used in everyday life?

You might have heard about some of the scientific findings attributed to Hungarian researchers. For example, the translucent *Light Transmitting Concrete* is the invention of a young Hungarian architect, Áron Losonczi. Regarded by Time magazine as the most significant invention in 2004, this innovation can fundamentally transform architecture. In 2006, the Sigma Xi Scientific Honor Society, comprising of 65,000 scientists, among them 200 Nobel laureates, elected Péter Baranyi as young researcher of the year, for his successful findings in a new approach to the *vision model* in robotics. An old mathematical conjecture was proven in practice by lecturers of the Budapest Technical University. An object with special qualities called *"Gömböc" (Roundy)* models the theme of *stability-instability*. In Fall 2006 the work of Péter Várkonyi and Dr. Gábor Domokos was on the cover of the prestigious Mathematical Intelligencer journal. Physicist and astronomer Gáspár Bakos lead the Hungarian research team, which not only designed and built a network of 6 telescopes – small sized, but capable of covering large sky areas – but with the help of it also discovered *11 planets outside the Solar system* called "Exo Planets".

TRAVEL

Debrecen Is a Vibrant Scientific Center

Our Local Correspondent Reports

Hungary's second largest city with about 400,000 inhabitants is not only the region's economic, cultural and scientific center, but is also a vibrant, colourful, lively city that offers excellent conditions for new residents. The Debrecen University is one of Central Europe's highest ranking institutions. With its 30,000 students and faculty, it is the country's largest higher education institution, its 23 doctoral programs offering the widest spectrum of scientific education. As a result, more and more corporations count on its increasing R&D potential, for example: Michelin, Electolux, Flextronics, National Instruments, FAG, TEVA, Samsung Inc, T-Systems, or British Telecom are all established in the city.

Cultural life in the city is impressive, with Central Europe's most modern art gallery, the MODEM, the Csokonai Theatre, and many other amateur and alternative theatre and dance companies. Outside of the capital city, it is Debrecen that has the most eventful classical music scene, whereas jazz lovers can not only select from the many clubs, but can also enjoy international stars performing at the Debrecen Jazz Festival, which turns 38 years old this year. Six high schools offer bilingual education, and five of them issue international high school diplomas.

Besides 2000 hours of sunshine a year, Debrecen is also an attractive destination for foreigners because of the 200 thermal springs in the surrounding areas, and dozens of thermal baths.

> "My husband and I have been living in Debrecen for six months. We were not sure how we would handle our daily living like shopping, groceries, getting my hair done, etc. since we do not speak Hungarian which is a very difficult language. But we discovered the shopping, restaurants and accomodations offer far more value than we expected. In addition, we have enjoyed the high quality of life and beauty of Debrecen frequently walking to most places and visiting the surrounding area. It is also very safe here regardless of the time of day or night and we believe we made the right choice to move to this rapidly developing part of Europe.
>
> *Ruth Maroney, European Human Resources Director, National Instruments, Debrecen*

> "I have lived abroad in quite many different cities and nations, especially in big capitals like Tokyo, Madrid, Bruxelles and Vienna, and hence the idea of moving to Debrecen, a city that I did not really know before, was not particularly attractive to me. A few months, and my opinion changed completely. In Debrecen I found kind and helpful people, a vibrant student community, cultural life and folkloric traditions. I really enjoyed the friendship of many foreigners living there, and the Hungarian locals even more so. The location of the city allows me to reach an uncontaminated and relaxing natural setting in a matter of minutes.
>
> *Enrico Corniani, Marie Curie fellow 2007-08*

SOCIAL LIFE

Invitation

On March 30-31, 2009, the Ministry for National Development and Economy, in cooperation with the City of Debrecen organises a major regional conference in Debrecen. The event will feature high profile decision makers in the area of R&D and representatives of scientific research institutes and universities from neighbouring countries and Hungary. Its aim will be to present the unique opportunities offered by the ESS being established in Debrecen, and its implications regarding regional development and cross-border cooperation in Central-Eastern Europe. All those interested are welcome to attend the conference.

Information: www.esshungary.eu