



PrihlaskaVS - Use case from Slovakia: Transformation from Paper-Based to Central Electronic University Application

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Abstract

Prihlaska VS is a central electronic application system (CEA) designed to simplify the submission of applications to universities and higher education institutions in Slovakia. The platform facilitates the submission of applications, enables applicants to monitor their status, and fosters efficient communication with universities.

As a crucial tool for individuals seeking admission to Slovak universities, CEA caters to many applicants, including high school graduates, international applicants, and those pursuing further educational opportunities in Slovakia. The system features an intuitive, user-friendly interface, ensuring accessibility and ease of use for applicants with varying levels of technical expertise.

Prihlaska VS (CEA) has already helped 64.785 applicants choose a university.

1 Introduction

The transition from traditional paper-based university applications to the Central Electronic Application (CEA) system marks a significant step in modernising higher education admissions. This transformation enhances efficiency, transparency, and accessibility for applicants while streamlining university administrative procedures.

Historically, university applicants were required to complete paper applications manually, gather supporting documents, and submit them in person or by post. This process was often time-consuming, prone to errors, and lacked real-time student tracking options. Additionally, universities faced

administrative burdens in manually processing applications, verifying data, and handling communication with applicants.

Central e-application is a topic that has been addressed in different countries and organisations and relates to different life situations. For example, the ETIAS (European Travel Information and Authorisation System) is being developed within the European Union and will allow the electronic application of travel permits for third-country nationals (European Union, 2025). The Ministry of Foreign and European Affairs of the Slovak Republic offers various electronic services for citizens abroad, e.g., registration before travel abroad and issuance of travel documents (Ministerstvo zahraničných vecí a europských zalezitosta Slovenskej republiky, 2025). Another life situation for citizens is applying to universities. Several systems and organisations abroad are dedicated to central electronic application to universities. Here are some examples:

- UCAS (Universities and Colleges Admissions Service) in the UK: UCAS is the central system for applying to UK colleges and universities. Students can apply to several universities and courses at the same time through UCAS (UCAS, 2024).

- Common Application in the United States: The Common Application is a platform that allows students to submit a single application to multiple colleges and universities in the US. This system simplifies the application process and allows students to manage their applications in one place (Common Application, 2025).

- Studielink in the Netherlands: Studielink is the central application system for colleges and universities in the Netherlands. Students can apply to different study programmes through Studielink and manage their applications online. (Studienlink, 2025)

The above services exemplify how central electronic applications simplify and streamline administrative processes. Electronic university applications provide students with a simple and efficient way to apply to universities in different countries.

In Slovakia, the Central Electronic Application to Higher Education (CEP) project was first submitted to the Ministry of Education and Science of the Slovak Republic in December 2007, following a request from the Ministry of Education and Science of the Slovak Republic under the title "Electronic Application to Higher Education". It was developed based on the following materials:

- Electronisation of university applications, Feasibility Study, August 2007.
- Portal Solution for Universities, Central Development Project, 2005-2007 (Portal VS).

The Central Electronic Application Process (CEP) is a departmental information system presented through a web interface at <https://www.prihlaskavs.sk>.

The main objective of the project was to design a system for the introduction of a central electronic application to universities that:

- will create a new organisational and technical solution for applicants to higher education, enabling a transparent environment and a uniform way of applying to universities,
- will contribute to the simplification of the administration of the admission procedure, the integration of data and the implementation of the principles of e-government.

To address these challenges, the Ministry of Education introduced information system Prihlaska VS, the Central Electronic Application (CEA), a digital system that allows applicants to complete and submit their university applications electronically. Launched in a pilot phase in 2009 and fully operational since 2011, CEA has undergone continuous development, incorporating features such as:

- Automatic retrieval of data from the high school information system (personal data, address, high school information, high school grades)
- Automated data validation to reduce errors and missing information.
- Electronic authentication option using national ID cards for secure access.
- Integrated payment processing for application fees – generating QR code.
- Real-time tracking and notifications via SMS and email.
- Option to send application to the University's electronic mailbox.
- Direct submission to universities' electronic systems, reducing administrative workload.

The Centralised Electronic Application System (CEA) is integrated with Portal VS (Portal of Universities), which serves as a key source of data about universities, faculties, study programmes, deadlines, and other relevant information. This portal is populated and maintained by the universities, ensuring the data is accurate, up-to-date, and comprehensive. By linking CEA with Portal VS (Portal of Universities), applicants have access to a seamless and reliable flow of information, facilitating a more efficient and transparent university application process.

Despite its benefits, not all universities have fully adopted CEA. Institutions are currently classified into three levels of integration: Complete, Partial or Informational Integration. The level of integration of a university in CEA is decided solely by the school management.

The ultimate objective is to achieve complete CEA integration across all universities, ensuring a standardised, simple, efficient, and paperless admissions process. Key focus areas for further development include:

- Expanding CEA adoption among universities.
- Enhancing interoperability with other public administration systems.
- Strengthening data security and compliance with legislative requirements.
- Improving user experience through a more intuitive interface and additional features.

By advancing CEA, Slovakia moves closer to a fully digitised and modern university admissions system, aligning with global best practices and improving access to higher education for all applicants.

2 The CEA - from its inception to the present day

By implementing information and communication technologies in the university application process, the Ministry of Education, Research, Development and Youth of the Slovak Republic (MŠVVaM SR, Ministry of Education) has accelerated modernisation in the field of higher education, achieving a level comparable to the most developed countries in the world. The introduction of the Central Electronic Application (CEA) simplifies and streamlines the university application process, thereby, what as a life situation, contributing to public administration's overall efficiency and effectiveness in this area.

The creation of the Central Electronic Application (CEA) was initiated to fulfil Government Resolution No. 677 of August 15, 2007, under which the Government of the Slovak Republic approved a proposal for the digitalisation of university applications. This project forms a broader roadmap for introducing electronic public administration services (Tóthová, D., Fabuš, J. (2007), Tóthová, D. (2008 A, B), Kremeňová, I., Fabuš, J., & Tóthová, D. (2007)).

CEA focuses on implementing a central electronic service for university applicants, utilising information and communication technologies via the Portal of Universities. The development of this information system aligns with the objectives of the National Concept of Public Administration Digitalisation from 2021. The Central Electronic Application System (CEA) represents a fundamental service that must comply with security measures under Act No. 69/2018 on Cybersecurity.

CEA facilitates the administration and electronic submission of applications to all universities with the right to admit students in the Slovak Republic. It meets the need for a fast, simple, and modern way of applying to universities. It creates a transparent environment for all applicants, unifies application administration, and accelerates the modernisation of information systems to a level corresponding to current information and communication technology capabilities. It achieves its defined objectives – to speed up, refine, and generally simplify the application process, allowing applicants to complete their applications and choose and track their submitted university applications more efficiently.

The CEA system is functional and in full operation. However, further development is necessary. Not all universities in Slovakia are linked to the system, meaning they do not automatically accept

applications and require submission through their information system or in paper form. This contradicts the intended transparent environment for all.

The original CEA proposal, which wholly adhered to the "once-only" principle, has not been fully implemented, creating further opportunities for developing and integrating CEA with other public administration information systems.

The CEA information system has been operational since 2009, when its pilot phase was launched, involving three universities and twelve secondary schools, which had the opportunity to test the solution.

Since 2010, it has been fully operational. In 2017, it underwent a redesign.

In 2020 and 2021, CEA was further developed, adding functionalities such as the generation of payment details and integration with the Central Public Administration Portal (Slovensko.sk) (Tóthová, D. 2009, 2010, 2011, 2016). During the following year, 2022, the 2nd-degree applications considering related study programs were updated and integration between CEA and Slovensko.sk was tested. From 2023, it is in whole operation so that applications can be sent and delivered to universities' electronic mailboxes. The possibility of using an electronic signature has also been added.

In 2024, log-in via social networks and user authentication using an ID card were implemented, and all new features were promoted in the schools.

As of today, the mutual electronic data exchange between CEA and all universities has not been fully confirmed. Therefore, we distinguish three levels of university participation:

- Complete - Data is exchanged between the central electronic university application system and the university's information system. Students can access all submitted applications and their statuses on the portal, and updates are also provided via SMS. Currently, full integration has been achieved at seven universities.
- Partial – The university only receives information from the central electronic application system via an exchange format, incorporating the data into its information system. However, it does not provide feedback to applicants through the central system. Partial integration has been achieved at nine universities.
- Informational – The university only provides details about available study programmes on the Portal of Universities. Applications are accepted from the central system in paper form only, meaning applicants can complete and print the relevant form in a simple, user-friendly environment that meets the legal requirements for university applications. Informational integration has been achieved at nineteen universities.

The level of involvement of a university in CEA is decided solely by the school management. Three levels of involvement are because universities have their academic information systems, and it is difficult for them to abandon the idea that CEA is their competition. CEA is not a competition but an easing of labour for the applicant, simplifying his/her application processes and equal opportunities for all. The main reasons for the three levels of involvement are:

- the long-standing decision of the Ministry of Education to approve the central application, even though the idea for its creation came from a government resolution and a subsequently conducted feasibility study,
- the weak support from the Ministry so far (it was not until 2024 that the Ministry wrote letters of support to school rectors),
- the main problem is the lack of legislation; universities are not obliged to accept applications from the CEA, i.e., to connect with the CEA.

3 The CEA - what does the process look like today?

The process for applicants using the central electronic application system for Slovak universities is as follows:

1. Access the CEA: Visit the official website at www.prihlaskavs.sk.
2. Registration: Create a personal account by providing an email address and setting a password.
3. Profile Completion: Fill in personal details, including identification information, contact details, and educational background.
4. Selection of Study Programs: Browse the available study programs and select the ones applicants wish to apply for.
5. Application Form Completion: Complete the specific application form for each chosen program, ensuring all required fields are accurately filled.
6. Document Upload: Upload necessary documents, such as academic transcripts, certificates, and other supporting materials, as specified by the chosen universities.
7. Application Fee Payment: Pay the application fees for each selected program. Payment methods and instructions are provided within the portal.
8. Submission: After completing all required sections and ensuring the accuracy of the information, apply.
9. Application Status Monitoring: Log in to the account regularly to check the status of the application. Some universities provide feedback on the status of applications through the portal www.prihlaskavs.sk.

3.1 The CEA - the key features and advantages

Here are the key features:

- Centralised Application Submission: Applicants can apply to multiple universities and programs from a single platform.
- Digital Document Upload: Required documents such as academic transcripts and certificates can be uploaded directly to the system.
- Application Fee Payment: Secure and convenient online payment options are available.
- Real-Time Status Updates: Applicants can track the progress of their applications and receive updates from universities.
- User-Friendly Interface: A straightforward design that guides users through each application process step.

The main advantages of CEA are:

- Time Efficiency: The digital application process reduces paperwork and administrative delays.
- Cost Savings: Eliminates the need to mail physical documents and travel to institutions.
- Transparency: Applicants can monitor their application status in real-time, ensuring clarity and reducing uncertainties.
- Accessibility: Available online, making it easier for international students to apply without geographical constraints.
- Environmental Benefits: Reduces paper usage, promoting sustainability in university admissions.

Other advantages (advantages for the applicant, advantages for universities):

- an Internet portal available 24 hours a day, 7 days a week, operated on the newest equipment
- use of a central database for accredited study programmes
- use of individual university and faculty databases
- use of a central registry for students (downloading of data)
- decreasing office work at universities which have not yet implemented an electronic application process

- speeding up and improving the quality of internal processes
- making decision-making processes more effective
- a system of authorisation of applications
- an applicant enters personal data only once (in the case of submitting more than one application)
 - obtaining information necessary for electronic application in a short time from one location when filling out applications
 - the opportunity to use data about an applicant from a previous year
 - the opportunity to send an application to several universities without having to enter identical data repeatedly
 - the opportunity to correct data prior to sending
 - online tracking of application status
 - exchange of formats between the central application and universities
 - electronic payments
 - strong user support – Helpdesk
 - the connection of applications and results of state-wide leaving exams, the opportunity to import school results from the school information system
 - the execution of different calculations, statistics (Tóthová, D. 2019, 2021).

3.2 The CEA - what does the application look like?

- Elements of the system (Figure 1):
 - a) Prihlaska VS — The central electronic application (CEA) — is a separate application that has a link to the "Portal of Universities — Portal VS." All interactions are related in some way to this element, so it is the central, main element.
 - b) Portal VS — Portal of Universities. The portal ensures the availability of systematically organised and professionally guaranteed information regarding universities, creates space for the exchange of experiences and provides information about conferences, seminars, and educational products. It provides information about universities guaranteed by schools. Information and data can be used when filling out the application by uploading the necessary data from existing databases. All universities cooperate with the University Portal and update their data.
 - c) The Central Register of Students (CRS) is a database that contains data on all students and graduates of Slovak universities. It also contains available code lists that CEA downloads and creates an internal copy of, which it continues to work with.
 - d) Secondary school — The electronic student book contains data about students of secondary schools providing education, including their studies, completed subjects, grades, and graduation.
 - e) The central public administration portal (Slovensko.sk) is a citizen's electronic mailbox that serves for electronic communication with public authorities and ensures more effective and faster communication with public administration.
 - f) Facebook and Google are social networks through which citizens can register in the CEA system.
 - Actors:
 - a) Applicant – a person interested in applying to study at a university.
 - b) University – a higher education institution that educates students at three levels of study in various accredited study programs and can award students degrees. Decides on the admission of the applicant to study.

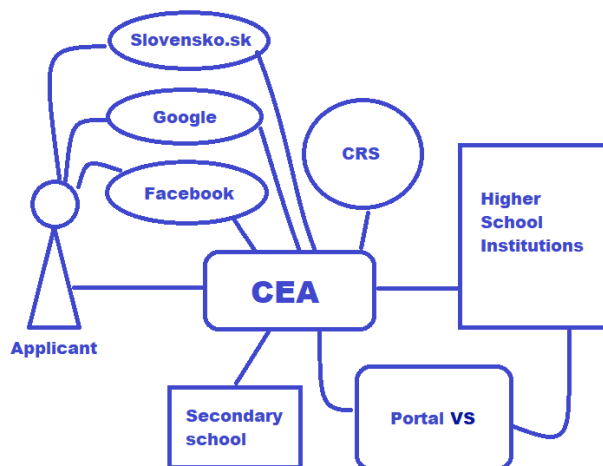


Figure 1: Elements and relations between them

- Interactions:

a) Data and information — the applicant fills them in according to the degree of automation of the electronic application to the university and which registration method he chooses.

b) Information on status and processing:

- the applicant receives feedback on the status and processing of the application,

- the university enters information on the status and processing of the application.

c) Applicant data — The chosen registration method will load the applicant's available data (email, first and last name, address, etc.) from linked subject.

d) Data on students, their studies, and results - This is data from the electronic student book used by most secondary schools.

e) Numbers - available numbers.

f) Application Forms — These are electronic application forms that the school receives or has the option to download depending on the level of connectivity.

g) Data about the university — are data entered by responsible representatives of the university about the university and its faculties, study programs, etc. The data source is Portal VS (Tóthová, D., & Fabuš, J. (2015 A, B)).

3.3 Measurable indicators

The basic measurable indicators that we monitor are:

- Number of visits to the Portal of Universities
- Number of pageviews to the Portal of Universities
- Number of registered applicants
- Number of saved and submitted applications
- Number of universities connected to CEA (levels complete and partial)

The achieved values of the Portal of Universities indicators for academic year 2023/2024 and 2024/2025 are shown in Figure 2, achieved values of the CEA indicators for academic year 2022/2023 and 2023/2024 are shown in Figure 3. The number of universities connected to CEA at the complete level increased from 5 to 6 in the last two years and at the partial level increased from 8 to 10.

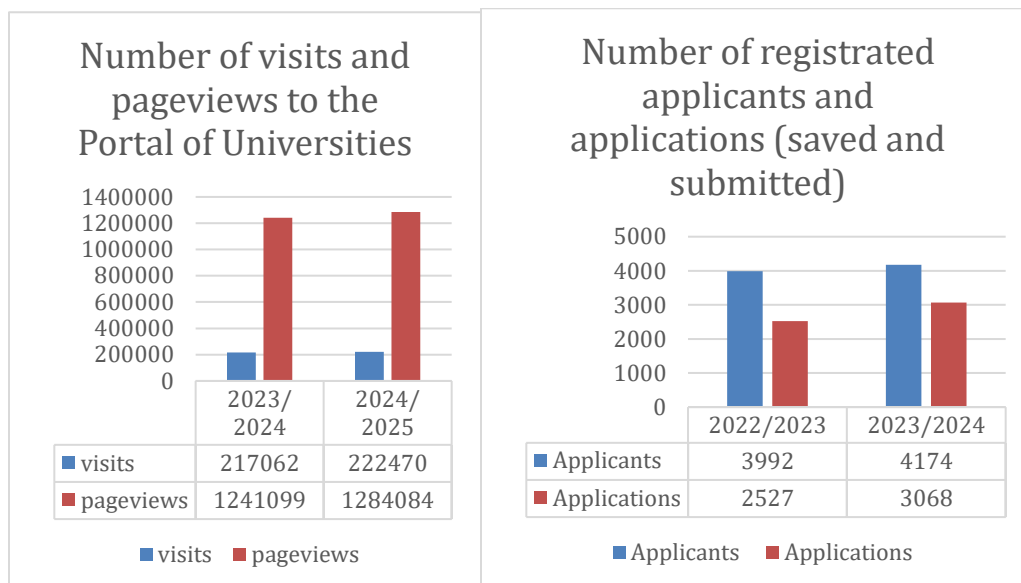


Figure 2: Visits / pageviews to the Portal of Universities **Figure 3: Registered applicants and applications**

3.4 New feature – Simplified Payment Process

We have successfully implemented a new feature in the CEA application, enabling schools to generate payment details for entrance examination fees. This can be done by displaying the payment information with an option to save it as a PDF or by generating a QR code for seamless payment processing. This enhancement simplifies the payment process for applicants and schools alike. Schools enter the payment details on the Portal of Universities, and once the application is accepted, they send the information to the applicant via the CEA system. This includes a filled-out payment form with a PDF download option or a generated QR code for easier payment processing.

4 Future direction

The future direction is to develop the CEA so that it meets the needs of users and legislative requirements. This primarily addresses the need for a fast, simple, and modern university application method. It involves utilising the transparent environment created for all prospective university applicants by the universities—ensuring full involvement from all universities, unifying the application administration, accelerating the modernisation of the information system to match the current capabilities of information and communication technologies, and ensuring security in compliance with applicable legislation.

The biggest challenge remains to achieve support from the state, namely the legislation amendment, according to which schools would have to accept applications from CEA by law. Thus, all schools would achieve a complete level of participation. On April 11, 2025, the Minister of Education Tomáš Drucker (Ministerstvo školstva, výskumu, vývoja a mládeže Slovenskej republiky, 2025) presented the substantive intention of the new Act on Universities, wherein the section - Digitalization of Services - he stated that a single electronic application for all universities would be introduced - with the aim of less bureaucracy and a more modern system.

Unless the legislation changes, our task is to raise awareness at universities. This is facilitated by sufficient information through announcements on the website, news, and a regular newsletter for applicants, academic officials, study advisors, study officers, or other communication tools. This will also be helped by a seminar held in a hybrid format on June 25, 2025, in Nitra under the title Portal of Universities and Central Information Systems of Universities. At the same time, the reason for the non-connection of the VS with the CEP will be determined by sending an online form, and a thorough analysis of the reasons will be carried out.

5 Conclusion

The CEA (Prihlaska VS) is a modern and efficient solution for university admissions in Slovakia. By digitising the application process, it enhances accessibility, convenience, and transparency for applicants. The platform represents a significant step forward in streamlining higher education enrolment, benefiting both students and educational institutions.

The objective is to develop CEA further to meet user and legislative requirements, particularly the need for a fast, simple, modern application process. The aim is to ensure that universities fully utilise the transparent environment created for all applicants, achieve full integration at all institutions, unify application administration, and accelerate the modernisation of information systems to align with current information and communication technology capabilities. Ensuring security by applicable legislation remains a priority.

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