

STUDY OF THE ELECTRONIC INFORMATION SYSTEM (SEI) IN A MULTICAMPI HIGHER EDUCATION INSTITUTION, WITH EMPHASIS ON THE PERIOD OF THE COVID-19 PANDEMIC

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Abstract: The objective of this work was to evaluate the importance of using the Electronic Information System (SEI), at ``Universidade Federal de Campina Grande``- UFCG, since the beginning of its implementation at UFCG, with emphasis on the period of the COVID-19 pandemic. It was based on a bibliographical survey, data available in the SEI itself, reports provided by the SEI Support of the UFCG, and the National Electronic Process (PEN). The following were studied: registered units, processes and documents generated at SEI, from 2017 to 2021 during the COVID-19 pandemic. It was found that the SEI/UFCG has 735 units and 30,549 registered users, with 7,072 internal users and 23,477 registered external users. The number of documents generated and received since the implementation of the SEI at UFCG until November 3, 2020, was 1,005,868 digital electronic documents. According to the data analysis, it was estimated that the number of processes registered in 2021 will reach a total of 5,012,552 processes, that is, an increase of 842% in 2021 compared to 2020. It was concluded that SEI /UFCG allowed a great advance in the management of processes and documents in all sectors of the UFCG. The use of SEI at ``Universidade Federal de Campina Grande`` can be considered a decisive tool to mitigate the effects caused by the COVID-19 pandemic, allowing the development of activities remotely in a satisfactory way, thus significantly contributing to curb the spread of the new coronavirus and reduce the number of deaths from COVID-19.

Keywords: Information Technology. Process and Document Management. New Coronavirus.

INTRODUCTION

Due to the measures adopted in Brazil with the aim of curbing the spread of the new coronavirus, most public bodies at the federal, state and municipal administrative levels have intensified the use of electronic means to continue offering services to the population remotely.

In Brazil, one of the electronic information systems used in the three spheres of public administration is the Electronic Information System (SEI). At the federal level, most Federal Universities adopt the SEI, and Universidade Federal de Campina Grande - UFCG is one of them.

Considering that face-to-face administrative and academic activities were mostly replaced by the remote system, educational institutions had to reinvent themselves to continue providing the services demanded by the administrative and academic sectors. The UFCG regulated the Extraordinary Academic Regime (RAE), which allowed the offer of remote teaching and learning activities during the 2020.3 supplementary period, created for Universidade Federal de Campina Grande, in the scenario of health exceptionality caused by COVID-19. It is possible that the difficulties to operate remotely were not greater at UFCG, because it has been using SEI since 2016, favoring the normal processing of administrative processes, as well as the inclusion of new types of processes in the SEI, in order to quickly, as UFCG has teams trained for this challenge, and thus able to meet the new demands that have emerged on a larger scale with the intensified use of the remote system during the COVID-19 pandemic.

In order to analyze the SEI influence on the functioning of administrative and academic activities during the period of the COVID-19 pandemic, the objective of this work was to evaluate the importance of using

the SEI at Universidade Federal de Campina Grande - UFCG, through the increase in the number of units, processes and documents registered at SEI/UFCG since the beginning of its implementation at UFCG, with emphasis on the period of the COVID-9 pandemic.

The work was developed based on a bibliographical survey related to the subject, and on data available in the Electronic Information System (SEI), reports provided by the SEI Support of UFCG and National Electronic Process (PEN). The following were studied: registered units, internal and external users qualified in the SEI, the volume of electronic processes generated and the number of documents generated in the SEI, from 2017 to 2021, during the COVID-19 pandemic.

THEORETICAL REFERENCE

INFORMATION AND COMMUNICATION TECHNOLOGY

With the advent of information and communication technologies (ICTs), the world felt the need for changes in its standards in general, breaking paradigms and accepting new means to produce, conduct business, administer, teach and learn, develop products as well as selling them more quickly and safely, using more and more new technologies, which continue to be developed.

The growth of the market and the use of Information Technology resources by organizations demonstrate the evolution of this technology and the dependence that public and private organizations have on it (ALBERTIN, 2010).

According to Nazareno et al. (2006) "it is no longer possible to talk about assuring health, education, water, electricity and security to populations in a way that is dissociated from technological development".

Information systems evolve very quickly,

due to the continuous emergence of new technologies, requiring constant studies on the subject, aiming to keep up to date with the solutions offered by the systems market, mainly with regard to information for security (FERREIRA, 2017).

Electronic government, or e-gov, allows public access by digital means to information and services offered by governments to citizens (NARAZENO et al., 2006). More quickly and transparently.

E-government is a way of intensifying the use of information technology by the Public Power, making the State more collaborative, flexible and innovative in recent decades according to Agune and Carlos (2005) cited by Diniz, et al. (2009). Electronic government had a greater expansion from the middle of the last decade of the last century, with the intensification of the use of ICTs at different levels of government (DINIZ et al., 2009).

Aiming at modernizing public administration through the use of ICTs, efforts are being made to improve the efficiency of government operational and administrative processes (DINIZ, et al. 2009).

One of the systems successfully used in various sectors of government, federal, state and municipal is the Electronic Information System (SEI). According to Brazil (2020), the SEI is a document management tool and electronic processes that allow the production, edition, signature and processing of the same within the system itself and interact simultaneously with several units in the same process, in a way remotely, thus reducing the processing time and performance of the activities inherent to these processes.

The main benefits of the SEI are that it is free for use by public bodies, it is 100% web-based and can be accessed by the main browsers, it allows the processing of processes in multiple units, the control of deadlines, the creation of document models, it contributes to

the environmental sustainability and reduces losses and undue destruction of documents and processes (BRAZIL, 2020).

Nowak (2018), in studies to evaluate the “use of the electronic information system – SEI in the public service: technological innovation to improve administrative efficiency and institutional knowledge”, identified that the “SEI System, as a tool that expands knowledge, with a focus on quality and excellence in public services”, has contributed to improving administrative efficiency with transparency and agility in the processing of processes and in obtaining the expected results.

DEVELOPMENT AND USE OF THE ELECTRONIC INFORMATION SYSTEM (SEI)

The SEI was developed by the Federal Regional Court of the 4th Region (TRF4), one of its main characteristics is the non-necessity of using paper as a physical support for institutional documents as well as the sharing of knowledge with updating of new events in real time.

The National Electronic Process (PEN) created in 2015, pursuant to Decree Number: 8,539, of October 8, 2015, which provides for the use of electronic means to carry out the administrative process within the bodies and entities of the direct federal public administration, autarchic and foundational, stipulated a period of six months, counted from the date of publication of this Decree, for bodies and entities of the direct federal, autarchic and foundational public administration to present a schedule for the implementation of the use of electronic means, and the use of electronic means for carrying out an administrative process for a period of two years, counted from the date of publication of this Decree.

According to Romaro (2019) “the SEI was given free of charge to the Federal Public

Administration, through the Ministry of Planning, responsible for distributing the PEN to other federal agencies. On 06/08/2018, 361 public bodies already used the system”.

According to data from the National Electronic Process (PEN) in 2021, there are already 364 bodies that have adhered to the use of the Electronic Information System (SEI), of which 54.9% are federal, 37.4% municipal and 7.7% state, corresponding to 200, 136 and 28 bodies in the respective governmental spheres (BRAZIL, 2021).

UNIVERSIDADE FEDERAL DE CAMPINA GRANDE – UFCG

The “Universidade Federal de Campina Grande” – UFCG, was created from the dismemberment of “Universidade Federal da Paraíba” - UFPB, by Law 10.419, of April 9, 2002, is a Federal Public Autarchy Institution of Teaching, Research and Extension, linked to the Ministry of Education, with headquarters and jurisdiction in the city from Campina Grande and scope of action in the State of Paraíba. It enjoys autonomy according to its Statute and pertinent federal legislation (UFCG, 2004).

The structure of UFCG is multicampi, distributed in the State of Paraíba. A university campus is considered to be each of the physical bases integrated with an administrative structure, where its permanent teaching, research and extension activities are developed, according to its Statute (UFCG, 2004).

According to the Institutional Development Plan - PDI, of “Universidade Federal de Campina Grande”, approved, as stated in the resolution in Resolution Number: 04/2020, “Universidade Federal de Campina Grande”, although created from the dismemberment of “Universidade Federal da Paraíba” (UFPB) in 2002, its history begins in 1952, with the creation of the Polytechnic

School, a pioneer in higher education in the northeastern interior. In 1960, the Polytechnic School and the Faculty of Economic Sciences, created in 1955, were federalized and became a university campus of the UFPB, in the city of Campina Grande (UFCG, 2020).

Among the fundamental principles of the UFCG are the “inseparability between teaching, research and extension; ethics as a guide for institutional practice, in all its internal relations and with society; the public, free, democratic nature” (UFCG, 2004).

The UFCG’s Mission is: To produce and promote avant-garde knowledge and social transformation. And as a Vision: To become a national reference in academic training and in the production of science and technology, with a focus on sustainable and socioeconomic development (UFCG, 2020).

The Administrative Structure of UFCG, is formed by the University Council, which is formed by the Full Collegiate and Superior Chambers. With hierarchical levels defined in the Statute and the Regiments (UFCG, 2020). It consists of 11 (eleven) Teaching Centers, offering 77 (seventy-seven) Undergraduate Courses, 35 (thirty-five) Masters and 12 (twelve) Doctorates. It also offers teaching in Basic Education (child, secondary and technical) as stated in the PDI (UFCG, 2020). The teaching staff in 2020 had 1532 (one thousand five hundred and thirty-two) effective teachers. Of these 1015 (one thousand and fifteen) are Doctors, 353 (three hundred and fifty-three) are Masters, 97 (ninety-seven) are Specialists. Considered a well-qualified teaching staff, with 66% Doctors and 23% Masters, in a total of 89% formed of Doctors and Masters (UFCG, 2020).

The Technical-Administrative staff, formed by 1435 (one thousand, four hundred and thirty-five) employees, distributed as follows: 692 (six hundred and ninety-two) working in the Centers, 393 (three hundred and ninety-

three) in University Hospitals, 350 (three hundred and fifty) in the Rectory and other sectors (UFCG, 2020).

The student body is made up of 19,101 (nineteen thousand one hundred and one) students, of which 16,611 (sixteen thousand six hundred and eleven) undergraduate students and 2490 (two thousand four hundred and ninety) graduate students, distributed across the 7 (seven) campuses of the Institution (UFCG, 2020).

IMPLEMENTATION OF ELECTRONIC INFORMATION SYSTEM (SEI) IN UNIVERSIDADE FEDERAL DE CAMPINA GRANDE - UFCG

Among the Federal Institutions of Higher Education (IFES), ``Universidade Federal de Campina Grande`` was one of those that adopted the Electronic Information System (SEI) in 2016. Through a Technical Cooperation Agreement (2016) entered into between the Union, through the Ministry of Planning, Development and Management, and ``Universidade Federal de Campina Grande``, with the purpose of making the electronic information system (SEI) available for carrying out the Administrative Process electronically, in accordance with Administrative Process Number: 05110.004337/201638.

According to the first clause of the Technical Cooperation agreement, the object of this agreement was the assignment of the right to use the Electronic Information System (SEI) software, pursuant to art. 11 of Joint Ordinance Number: 3, of December 16, 2014, created by the Federal Regional Court of the 4th Region (TRF4), to carry out the administrative process electronically at the UFCG (BRAZIL, 2014).

Resolution number 02 of 2016, which establishes the Electronic Information System – SEI as the administrative electronic process

system of ``Universidade Federal de Campina Grande``, was prepared and approved by the Superior Chamber of Administrative-Financial Management of the University Council, of ``Universidade Federal de Campina Grande``. The implementation of the SEI in accordance with the Statute and Regulations of the same, and considering the observance and application of the principle of efficiency of the public administration, foreseen in the Federal Legislation, specifically, considering the Decree n. 8,539, of October 8, 2015, which deals with the use of electronic means to carry out the administrative process within the bodies and entities of the federal, autarchic and foundational public administration. In this context, the objective was to meet the needs of improving the document management of ``Universidade Federal de Campina Grande``, through an electronic information system that presents the information security requirements that promote speed, economy and authenticity.

In order to ensure greater efficiency and effectiveness in the processes demanded by the institution, the Superior Chamber of Administrative-Financial Management of the University Council, of ``Universidade Federal de Campina Grande``, deliberated and approved in plenary the Resolution N° 02/2016 in a meeting held on 06 May 2016 (Process 23096.037779/15-65), which according to its Art. 1st and Sole Paragraph, resolves to institute the Electronic Information System – SEI, developed by the Federal Regional Court of the 4th Region (TRF 4), as an official system for managing processes and administrative electronic documents within the scope of ``Universidade Federal de Campina Grande``, to be implemented in a staggered manner, being governed by the terms set forth in this Resolution and relevant legislation.

With the evolution of technology and

society's demand for the improvement of public services in Brazil, the Public Power invested in the search for solutions to this problem, in order to meet the demand more quickly, in a safe and transparent way (AMARAL and UCHÔA 2014).

According to Decree Number: 8,539, of October 8, 2015, determined the use of electronic means to carry out the administrative process within the scope of bodies and entities of the direct federal, autonomous and foundational public administration with the following objectives: I - to ensure efficiency, efficacy and effectiveness of governmental action and promote adequacy between means, actions, impacts and results; II - promote the use of electronic means to carry out administrative processes safely, transparently and economically; III - expand environmental sustainability with the use of information and communication technology; and IV - facilitate citizen access to administrative instances (BRAZIL, 2015).

Ordinance SEI Number: 002, of October 25, 2018 (UFCG, 2018a) established the Electronic Information System (SEI) as the UFCG's official process and electronic document management system and defined the rules, routines and procedures for instruction of the electronic process at UFCG. In line with the provisions of Resolution Number: 02, of May 9, 2016, "Universidade Federal de Campina Grande" (UFCG); Decree Number: 8,539, of 10/08/2015, which provides for the use of electronic means to carry out the administrative process within the scope of bodies and entities of the direct federal public administration, autarchic and foundational; MEC Ordinance Number: 1,042, of 11/04/2015, which provides for the implementation and operation of the electronic process within the scope of the Ministry of Education; the provisions of Decree Number: 8,936, of 12/19/2016, which

establishes the Digital Citizenship Platform and provides for the provision of digital public services, within the scope of bodies and entities of the direct federal, autarchic and foundational public administration; with the Technical Cooperation Agreement entered into between the UFCG and the Ministry of Planning, Development and Management, through Administrative Process Number: 05110.004337/2016-38;

CHALLENGES IN THE IMPLEMENTATION OF THE ELECTRONIC INFORMATION SYSTEM (SEI) IN "UNIVERSIDADE FEDERAL DE CAMPINA GRANDE" - UFCG

According to the SEI/UFCG Newsletter (2018), the effectiveness of the SEI at the UFCG took place in 2015. One of the problems faced in terms of implementation, as it most likely happened in all institutions that adhered to the use of the SEI, is the migration from physical processes to electronic processes. However, no negative aspects related to the technical part of the Electronic Information System (SEI) were pointed out (UFCG, 2018b).

Another difficulty observed and reported in the SEI/UFCG Newsletter (2018) concerns the breaking of paradigms in the sense of assimilating the new culture intrinsic to the process of using digital technologies. To overcome this challenge, it was necessary to innovate in terms of competences and identify the specific situations of each sector, defining strategies to meet peculiarities inherent to the sectors of all areas of the institution.

The SEI Management Committee advised that physical processes be gradually migrated to electronic means. This allowed the teams involved in the implementation of the system to consistently elaborate the basis of processes, documents and appropriate models to meet the Institution's demand. Awareness

campaigns, training and qualification were also carried out to achieve the expected objectives with the adoption of the SEI by the UFCG.

In the case of the UFCG, according to the SEI/UFCG Newsletter (2018), the total number of documents that were generated or inserted in the SEI, in 2018, was approximately 166,000 (one hundred and sixty-six thousand), a very considerable taking into account only a period of 2 years of its implementation in the Institution, a fact that corroborates the results observed by (FULTON et al. 2018) that deals with the paradigm shift.

Fulton et al. (2018) when studying the adoption of the Electronic Information System (SEI) by the Ministry of Justice: an evaluation from the perspective of users, verified a relevant fact of the study regarding the transition from the physical process to the electronic process, which according to the authors represents a paradigm shift in the organization studied.

Studies carried out to evaluate the impacts of the implementation of the Electronic Information System (SEI) at "Universidade de Brasília" - UnB, are reported questions and difficulties during its implementation of the SEI but demonstrated that there was a reduction in the cost of transportation, paper, printer, toner and others office materials, human resources, transportation and physical space for deposits and filings (NASCIMENTO, 2017).

Amaral and Uchôa (2014) mention that the SEI has as principles the maximization of time to carry out administrative activities, and by using the benefits of the electronic means, they provide greater speed with transparency and security.

Silva and Souza (2020) analyzed the main contributions, risks and limitations of using the SEI in the management and processing of documents at "Universidade Federal

de Viçosa" (UFV) and concluded that the system is an important tool that promotes publicity and efficiency public service and saving resources.

The "Universidade Federal de Campina Grande", by using the SEI system, had less difficulty with regard to its management during the COVID-19 pandemic, however, it was necessary to improve in terms of training and implementations in the System to meet a greater demand in all the sectors of the University, also considering that UFCG is a multicampus University, with its headquarters on Campus I, located in the City of Campina Grande PB and with six other campuses outside the headquarters with significant distances, as is the case of Campos de Sousa and the from Cajazeiras that are 300 and 346 km away from the headquarters, respectively. According to the SEI-UFCG Activity Report (2020), since the implementation of the SEI-UFCG, there has been a major restructuring of the units within the System, aimed at optimizing work logistics and efficiency in UFCG management actions.

UNITS AND INTERNAL AND EXTERNAL USERS REGISTERED WITH SEI/UFCG

According to the Bulletin/SEI (UFCG, 2018b) the SEI-UFCG already had a number of 533 (five hundred and thirty-three) registered units and had 10,700 (ten thousand and seven hundred) registered users, of which 5,342 (five thousand three hundred and forty-two) users internal to the system via PSI - (SEI-UFCG Authentication Server) and 5,358 (five thousand three hundred and fifty-eight) external users. In the year 2020, according to the SEI Report (2020), the SEI-UFCG had a total of 735 (seven hundred and thirty-five) registered units and a total of 30,549 (thirty thousand five hundred and forty-nine) registered users, of which 7,072

(seven thousand, seventy-two) internal and 23,477 (twenty-three thousand, four hundred and seventy-seven) external.

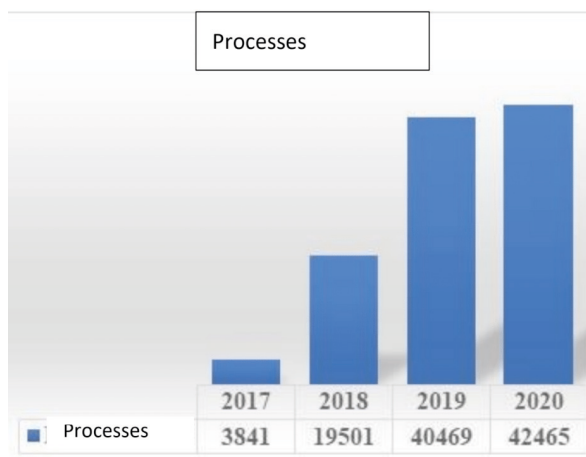
RESULTS AND DISCUSSION

According to the SEI/UFCG/2020 Report (UFCG, 2020) since the implementation of the SEI, 387 (three hundred and eighty-seven) types of processes have been registered in the UFCG. With 148 types demanded by external users, through the SEI/UFCG Electronic Petition Module and 239 demanded by internal users.

SEI/UFCG has 735 (seven hundred and thirty-five) registered units and about 30,549 (thirty thousand five hundred and forty-nine) registered users, of which 7,072 (seven thousand and seventy-two) are internal users and linked to the PSI system - (SEI/UFCG Authentication Server) and 23,477 (twenty-three thousand, four hundred and seventy-seven) registered external users (UFCG, 2020).

According to the SEI/UFCG/2020 Report (UFCG, 2020), the number of electronic processes generated in the SEI, in 2018, was 19,501 (nineteen thousand five hundred and one). That in relation to the year 2017, there was an increase in the generation of processes in the SEI-UFCG superior to 500%, being considered an exponential increase. Number of processes generated by the SEI, in the period from 2017 to 2020, are shown in Graph 1.

Analyzing the data presented in Graph 1, there is an increase in the number of high processes between the years 2017 to 2019, in the order of 953% (nine hundred and fifty-three percent). A very considerable increase that occurred gradually with the implementation of the system in 2017 until the year 2019. It must be noted that the data for the year 2020, as they were not complete, were not considered for the calculation of the annual percentage increase.



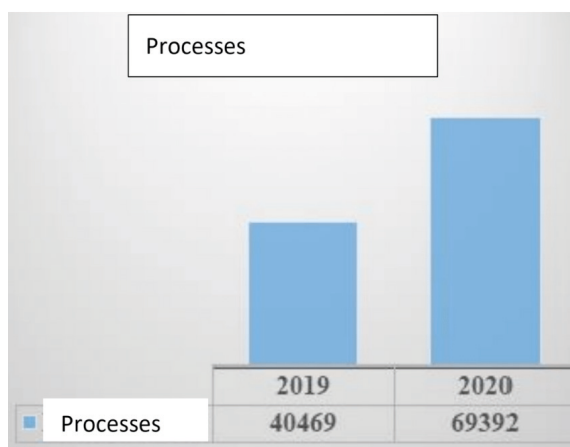
***Graphic 1.** Processes generated by SEI/UFCG from 2017 to 2020**.

*Elaborated by the authors.

** The data for the year 2020 shown in this graph refer to the period from 01/01 to 11/03, 2020.

Data source: SEI/UFCG Report (UFCG, 2020).

Considering the complete data of the UFCG National Electronic Process indicators (BRAZIL, 2021) for the year 2020, compared to the complete data for the years 2019 presented by the SEI/UFCG Report, the number of processes can be seen in Graph 2.



***Graphic 2.** Case numbers generated by SEI/UFCG, in the years 2019 and 2020.

* Elaborated by the authors.

Data source: SEI/UFCG Report (UFCG, 2020) and PEN (BRAZIL, 2021).

The complete data for the year 2020, according to the PEN, presented in Graph 2, demonstrate that there was a 71.5% increase in the number of lawsuits in 2020 compared to 2019. This very high increase between 2019 and 2020, probably occurred due to the COVID-19 pandemic, in view of the restrictions imposed to reduce the contagion of the new coronavirus and the boost in the use of the remote system. So, almost all face-to-face activities were suspended in all segments of the Institution. According to MEC Ordinance Number: 544, of June 16, 2020, which authorized the replacement of face-to-face classes with classes in digital media, during the pandemic of the new coronavirus - Covid-19 [...] (BRAZIL, 2020) and the Resolutions: 05/2020; 08/2020 dealing with activities at UFCG during the pandemic period (UFCG, 2020a; 2020b).

The number of documents generated and received since the implementation of the SEI at UFCG until November 3, 2020, was 1,005,868 (one million, five thousand, eight hundred and sixty-eight) digital electronic documents (digital or digitized) according to the Report SEI/UFCG (UFCG, 2020).

Due to lack of access to data referring to the period from January to April 2021, they were not presented in this work, however, based on the general PEN data for this period, it was possible to make an estimate for the UFCG, as shown below.

The business indicators that deal with data referring to the number of administrative processes, administrative units, users and documents registered in the Electronic Information System (SEI) in Brazil, in the years 2020 and 2021 (BRAZIL, 2021) are found in table 1.

Indicators	2020	2021**	Total
Administrative procedures	2.428.855	16.876.566	19.305.241
Administrative units	6.854	46.207	53.061
Registered users	100.981	815.721	916.639
Registered documents	35.203.796	136.969.918	172.168.714
Internal registered documents	10.669.932	59.709.832	70.379.764
External registered documents	24.533.864	77.255.086	101.788.950

Table 1 - Business indicators presented by PEN/SEI in the years 2020 and 2021*.

* Table prepared by the author.

**Data from January 1st to April 12th, 2021.

Analyzing the data in the table, it is observed that there was a very large flow in the two years studied, considering that since March 2020, due to the COVID-19 pandemic, practically all sectors of public administration began to operate from home office, the increase in the flow of all indicators is justified. It is worth mentioning that the increase observed in just 3 months and 12 days, in the year 2021 (data access date April 12, 2021), there was an extraordinary growth in all evaluated indicators: 595% for administrative processes, 574% in the administrative units, 707% in the number of registered users and 289% in the number of registered documents. Considering that this increase took place in just a period of 112 days, if we extrapolate to 365 days, the perspective is that the increase in the number of registered documents will reach 331,648,522 (three hundred and thirty million, six hundred and forty-eight thousand, five hundred and twenty and two) documents registered in the year 2021, corresponding to an increase of 942% compared to the year 2020.

Considering that in the PEN, the data observed for registered documents increased

by 289%, computed only 112 days of 2021 (from January 1st to April 12th, 2021), that is, in just 3 months and 12 days.

In view of the PEN data (BRAZIL, 2021), the number of processes registered in the UFCG by the SEI was 595,435 (five hundred and ninety-five thousand, four hundred and thirty-five) processes in the year 2020. Based on this the percentage growth registered in the PEN for all Processes registered in Brazil by the SEI, in the same period, which was 289%, and projecting for the 365 days of the year 2021, at the end of 2021, the forecast is for a quantitative of 5,607.987 (five million, six hundred seven thousand, nine hundred and eighty-seven) lawsuits, as shown below:

If in the year 2020, 595,435 (five hundred and ninety-five thousand, four hundred and thirty-five) processes were registered. When considering the growth shown by the PEN for the 112 days of 2021, which was 289%, we have $(595,435 \times 289 / 100 = 1,720,807)$ processes, that is, 15,364 (fifteen thousand three hundred and sixty-four) processes per day. If this growth is considered for the whole year of 2021, the result will be 5,607,987 (five million, six hundred and seven thousand, nine hundred and eighty-seven) processes, with an increase of 5,012,552 (five million, twelve thousand, five hundred and fifty and two) processes, that is, an increase of 842% (eight hundred and forty-two percent) in 2021 compared to 2020.

This growth is likely to occur as a result of the responses given to confronting the new coronavirus pandemic, which led the Institution to accelerate the implementation of new types of processes in the Electronic Information System (SEI), to meet the demand that has grown a lot in all UFCG sectors, both in administrative activities and in teaching, research and extension.

The need to use the remote system to carry out administrative activities in general, the processing of processes for all students to

carry out enrollments, withdrawals, defense processes for Course Completion Work (TCC), reports on internships, work projects research and extension; defense of dissertations, qualifications and theses; selection processes for monitoring, scientific initiation, master's and doctorate. These processes are all resolved directly via SEI/UFCG. Although this process of implementing new types of processes requires a lot of time, UFCG has teams already trained to implement new types of processes, allowing the Institution to accelerate these implementations and thus allow a smooth operation, in the face of all the problems of social distancing, changes from face-to-face to remote activities.

According to the SEI/UFCG Reports (2020) the main objectives for the year 2021 are: to improve the information technology infrastructure, guarantee maximum security; increase the volume of processes in the SEI-UFCG system; arrange for internal campaigns to be carried out in order to reduce the time taken to assess, process and conclude processes; offer new training to Servers on all UFCG campuses: and automate external user registration for undergraduate students, integrating the base arising from academic control with the SEI; and Integrate the UFCG into the Service Bus System (UFCG, 2020).

CONCLUSIONS

It was concluded with this work that the Electronic Information System - SEI/UFCG, allowed a great advance in the management of processes and documents in all sectors of ``Universidade Federal de Campina Grande``. Although there were some difficulties during the implementation period, which were overcome in a short time, with an exponential growth in the number of processes generated in the SEI, in the period from 2017 to 2019.

The use of the SEI at ``Universidade Federal de Campina Grande`` can be considered a

decisive tool to mitigate the effects caused by the COVID-19 pandemic. Allowing almost all UFCG sectors to carry out their activities remotely, helping to stop the spread of the new coronavirus.

To meet the demand that arose during the COVID-19 pandemic, the Information Technology teams implemented several new

types of processes and documents, to serve internal and external users.

The estimated growth in the number of registered processes for the year 2021 in relation to the year 2020 is 842%, which must also occur for the number of registered documents.

REFERENCES

ALBERTIN, Alberto Luiz; ALBERTIN, Rosa M. de Moura. **Estratégia de governança de tecnologia de informação: estrutura e práticas**. Rio de Janeiro, Elsevier. 2010. 212 p.

AMARAL, Vinícius L., UCHÔA Eduardo C. Processo eletrônico nacional: sua construção colaborativa e suas perspectivas. In: CONGRESSO DE GESTÃO PÚBLICA – CONSAD, 7, 2014, Brasília. **Anais [...]**. Brasília, DF, 25-27 mar. 2014. Disponível em: <https://docplayer.com.br/8478508-Processo-eletronico-nacional.html>. Acesso em: 23 abr. 2021.

BRASIL, **Processo Eletrônico Nacional – PEN, 2021**. Disponível em: <https://www.gov.br/economia/pt-br/assuntos/processo-eletronico-nacional>. Acesso em: 25 de abr. 2021.

BRASIL. **Acordo de cooperação técnica, SEI/MP, Processo administrativo nº 05110.004337/201638, de 25 de outubro de 2016**. Acordo de cooperação técnica que entre si celebram a União, por intermédio do Ministério do Planejamento, Desenvolvimento e Gestão, e a Universidade Federal de Campina Grande. Disponível em: https://pra.ufcg.edu.br/phocadownload/userupload/sei_ufcg/Acordo_Cooperacao_Tecnica.pdf Acesso em: 14 de abril de 2021.

BRASIL. Decreto n. 8.539, de 08 de outubro de 2015. Dispõe sobre o uso do meio eletrônico para a realização do processo administrativo no âmbito dos órgãos e das entidades da administração pública federal direta, autárquica e fundacional. **Diário Oficial da União**, Brasília, DF, 2015. Disponível em: <https://pesquisa.in.gov.br/imprensa/jsp/visualiza/index.jsp?data=09/10/2015&jornal=1&pagina=2&totalArquivos=260>. Acesso em: 22 abr. 2021.

BRASIL. Decreto nº 8.936, de 19/12/2016. Institui a Plataforma de Cidadania Digital e dispõe sobre a oferta dos serviços públicos digitais, no âmbito dos órgãos e das entidades da administração pública federal direta, autárquica e fundacional. **Diário Oficial da União**, Brasília, DF, 2016. Disponível em: <https://www2.camara.leg.br/legin/fed/decret/2016/decreto-8936-19-dezembro-2016-784065-publicacaooriginal-151608-pe.html>. Acesso em: 23 abr. 2021.

BRASIL. Ministério da Economia. Secretaria Executiva. Secretaria de Gestão Corporativa. Diretoria de Administração e Logística. **Usuário do Sistema Eletrônico de Informações (SEI): cartilha**. 6. ed. Brasília: ME/SE/SGC/DAL, 2020. 113 p.

BRASIL. Portaria Conjunta nº 3, de 16/12/2014. Institui o modelo de governança do Sistema Eletrônico de Informações - SEI no âmbito do projeto Processo Eletrônico Nacional e dá outras providências. **Diário Oficial da União**, Brasília, DF, 2014. Disponível em: <https://www.gov.br/compras/pt-br/aceso-a-informacao/legislacao/portarias/portaria-conjunta-no-3-de-16-de-dezembro-de-2014>. Acesso em: 24 abr. 2021.

DINIZ, Eduardo Henrique et al. O governo eletrônico no Brasil: perspectiva histórica a partir de um modelo estruturado de análise. **Revista de Administração Pública**, Rio de Janeiro v.43, n.1, p.23-48, 2009. Disponível em: <https://www.scielo.br/pdf/rap/v43n1/a03v43n1.pdf>. Acesso em 22 abr. 2021.

FERREIRA, S. da Costa. **Sistema de Informação em segurança**. Londrina, Distribuidora Educacional S.A. 2017. 224p.

FULTON, Denise de Carvalho Pires et al. Adoção do Sistema Eletrônico de Informações (SEI) pelo Ministério da Justiça: uma avaliação na ótica de usuários. **Revista do Serviço Público**, v.69, n.4, 2018. Disponível em: <https://revista.enap.gov.br/index.php/RSP/article/view/3624>. Acesso em: 22 abr. 2021.

NASCIMENTO, Paulo Roberto da Silva. **Impactos da Implantação do Sistema Eletrônico de Informação (SEI): Estudo de caso da Universidade de Brasília**. 2017. Dissertação (Mestrado em Economia) - Universidade de Brasília, Brasília, 2017. Disponível em: https://repositorio.unb.br/bitstream/10482/25314/1/2017_PauloRobertodaSilvaNascimento.pdf. Acesso em: 22 abr. 2019.

NAZARENO, Claudio et al. **Tecnologia da informação e sociedade: o panorama brasileiro**. Brasília: Câmara dos Deputados, Coordenação de Publicações, 2006. Disponível em: <https://bd.camara.leg.br/bd/handle/bdcamara/2392>. Acesso em 22 abr. 2021.

NOWAK, Mary A. Muraski. **A utilização do Sistema Eletrônico de Informações – SEI no serviço público: inovação tecnológica para melhoria na eficiência administrativa e no conhecimento institucional**. 2018. Dissertação (Mestrado em Ciências Sociais Aplicadas) – Universidade Federal do Paraná, Curitiba, 2018. Disponível em: <https://acervodigital.ufpr.br/bitstream/handle/1884/55992/R%20-%20D%20-%20MARY%20ANNE%20MURASKI%20NOWAK.pdf?sequence=1&isAllowed=y>. Acesso em: 22 abr. 2021.

ROMARO, Ubirajara Costabile. **Os efeitos da adoção do processo eletrônico na Anatel sob a ótica dos custos de transação**. 2019. Dissertação (Mestrado Profissional em Economia e Mercados) – Universidade Presbiteriana Mackenzie, São Paulo, 2019. Disponível em: https://sucupira.capes.gov.br/sucupira/public/consultas/coleta/trabalhoConclusao/viewTrabalhoConclusao.jsf?popup=true&id_trabalho=7637386. Acesso em 22 abr. 2021.

ROVER, Ardinete; MELLO, Regina Oneda. **Normas da ABNT: orientações para a produção científica**. Joaçaba, Unoesc, 2020. 222 p.

SILVA, Leandro Gonçalves; SOUZA, Rosália Beber de. A gestão de documentos e tramitação de processos na administração pública, com a utilização do Sistema Eletrônico de Informações – SEI: um estudo de caso na Universidade Federal de Viçosa. **Múltiplos Olhares em Ciência da Informação**, [S.l.], v.10, 2020. Disponível em: <https://periodicos.ufmg.br/index.php/moci/article/view/25838>. Acesso em: 23 abr. 2021.

UNIVERSIDADE FEDERAL DE CAMPINA GRANDE. **Boletim de Serviço Nº 62/2018**, em 5 de dezembro de 2018. Campina Grande – PB, 2018b. Disponível em: <https://www.sei.ufcg.edu.br/wp-content/uploads/2019/07/Boletim-Informativo-SEI-UFCG-2018-VERS%C3%83O-PRONTA-PARA-PUBLICA%C3%87%C3%83O.pdf>. Acesso em: 24 abr. 2021.

UNIVERSIDADE FEDERAL DE CAMPINA GRANDE. **Estatuto / Universidade Federal de Campina Grande** - Campina Grande: UFCG, 2004, 47p. Disponível em: <http://www.ufcg.edu.br/administracao/documentosOficiais/estatutoDaUfcg.pdf>. Acesso em: 14 abr. 2021.

UNIVERSIDADE FEDERAL DE CAMPINA GRANDE. Portaria SEI nº. 002, de 25 de outubro de 2018. Institui o Sistema Eletrônico de Informações (SEI) como sistema oficial de gestão de processos e documentos eletrônicos da UFCG, define normas, rotinas e procedimentos de instrução do processo eletrônico, e dá outras providências. **Portaria 02/2018**. Campina Grande - PB, UFCG, 2018a. Disponível em: <https://pra.ufcg.edu.br/documentos-sei.html>. Acesso em: 23 de abr. 2021.

UNIVERSIDADE FEDERAL DE CAMPINA GRANDE. Relatório de Atividades SEI-UFCG/2020, Campina Grande, 03 de novembro de 2020. REITORIA da UFCG - **Boletim de Serviço Nº 62/2018** - 5 de dezembro de 2018. Campina Grande, 2020. Disponível em: <http://www.ufcg.edu.br:8080/chamadas/downloads/299709.pdf>. Acesso em: 25 de outubro de 2020.

UNIVERSIDADE FEDERAL DE CAMPINA GRANDE. Resolução Nº 02/2016, em 09 de maio de 2016. Institui o Sistema Eletrônico de Informações – SEI como o Sistema de Processo Eletrônico Administrativo da Universidade Federal de Campina Grande e dá outras providências. **Resolução Nº 02/2016**, Campina Grande – PB. 2016. Disponível em: https://pra.ufcg.edu.br/phocadownload/userupload/sei_ufcg/Resolucao022016_17022016.pdf. Acesso em: 23 abr. 2021.

UNIVERSIDADE FEDERAL DE CAMPINA GRANDE. Resolução nº 04/2020, em 05 de outubro de 2020. Aprova o Plano de Desenvolvimento Institucional – PDI da Universidade Federal de Campina Grande – UFCG, e dá outras providências. **Resolução 04/2020**. Campina Grande - PB, UFCG, 2020a. Disponível em: https://portal.ufcg.edu.br/phocadownload/userupload/resolucoes/RESOLUO%20N%2004.2020%20-%20PDI_2020_2024_.pdf. Acesso em 14 de abril de 2021.

UNIVERSIDADE FEDERAL DE CAMPINA GRANDE. Resolução nº 05/2020, de 19 de julho de 2020. Estabelece, excepcionalmente, em função da Pandemia da Covid-19, critérios para colação de grau antecipada dos cursos de graduação da Universidade Federal de Campina Grande, e dá outras providências. **Resolução n. 05/2020**. Campina Grande, 2020b. Disponível em: <http://sods.ufcg.edu.br/index.php/camara-ensino/resolucoes>. Acesso em 23 abr. 2021.

UNIVERSIDADE FEDERAL DE CAMPINA GRANDE. Resolução nº 08/2020, em 27 de agosto de 2020. Regulamenta a Mobilidade Acadêmica Interna para a Universidade Federal de Campina Grande, no cenário de excepcionalidade sanitária provocada pelo COVID-19 e no âmbito do Regime Acadêmico Extraordinário – RAE. **Resolução nº 08/2020**. Campina Grande - PB, UFCG, 2020b. Disponível em: <http://sods.ufcg.edu.br/index.php/camara-ensino/resolucoes>. Acesso em 23 abr. 2021.