Republika e Kosovës
Republika Kosova - Republic of Kosovo

Agjencia e Kosovës për Akreditim
Agencija Kosova za Akreditaciju
Kosovo Accreditation Agency

DIGITALIZATION FEASIBILITY STUDY

This report was produced at the request of the Kosovo Accreditation Agency. The report was prepared independently by:

Dr. Trenia Walker from the University of New Mexico, Albuquerque, New Mexico, U.S.A.
Dr. Krenare Pireva Nuci from the State Council of Quality (SCQ) of the Kosovo Accreditation Agency, Pristina, RKS.
Flamur Abazaj from the Kosovo Accreditation Agency (KAA), Pristina, RKS.

November 2021

List of Tables

List of Figures

Table of Contents

1. EXECUTIVE ABSTRACT

Digitalization is the process of using technology to improve how work gets done. The importance of digital technologies became even more obvious during the global pandemic related to the Coronavirus disease (COVID-19). The Kosovo Accreditation Agency (KAA) began the digitalization of services in 2018 with the launch of the e-Akreditimi V.1 database platform and a website. The website was recently upgraded by KAA staff. The accreditation database system has been maintained to a degree by the KAA staff; however, since it was never fully implemented it has never been fully functional. This project sought to evaluate stakeholders' opinions on KAA's digital tools, specifically the e-Akreditimi database and the website. Stakeholders included students, Academic Staff, and Administrative Staff and Management. We conducted a survey as well as interviews and focus groups. We found that there was very widespread support for digitalization among all stakeholders, who cited an increased transparency in the processes. The ability to upload their own documents was a main reason for this. Many stakeholders expressed concerns about the e-Akreditimi system, including the inability of the Academic Staff to reset passwords, query information and seamlessly upload new and/or updated documents. Also a request to have the declaration period extended year-round. Some of the Administrative Staff members were troubled by the manual processes of saving and sending materials on CDs. A fully functioning accreditation database system will be able to address all of these stakeholders' concerns. There is clear stakeholder support for the KAA; however, the availability and improved functionality of the digital tools must be addressed.

2. INTRODUCTION

Organizations have been digitalizing services for some time, although recent improvements in digital technologies has led to an unprecedented demand for even more digitalization. Digitalization and digital technologies now affect every aspect of our lives. The Pandemicshowed us how much this is true and gave us ideas of how many more services could be and should be digitalized. Now in our data driven world, it is even more essential that organizations fully digitalize as much, and as quickly, as possible (Andreessen, 2011). Digitalization and access to data puts system users in control of the processes. This democratized process and immediate access to information provides transparency, a way to increase citizen trust (Ranerup & Henriksen, 2019; Urbach & Röglinger, 2019).

Once digitalization is undertaken, organizations must understand that they will need to constantly expand and improve services as technologies evolve. User expectations and demands will also increase as part of the demand/supply cycle of digitalized services (Urbach & Röglinger, 2019). In order to improve stakeholder satisfaction, an organization must ensure that all of the features of the current system work, and that system improvements are made with regularity.

2.1 The Kosovo Accreditation Agency (KAA)

The Kosovo Accreditation Agency (KAA)[1] was established in March 2008 by the Ministry of Education, Science and Technology (MEST) in accordance with the Law on Higher Education (2003/14) in Kosovo, as the Agency that guarantees the quality of educational and scientific research in the higher education institutions in Kosovo.

Through the accreditation process, the KAA supports the development of quality in Higher Education Institutions and at the same time assures the society of Kosovo that the quality of teaching and learning is at the level of international standards.

The KAA's primary responsibilities are:

- Accreditation of Public and Private Higher Education Institutions;

- Accreditation of new Higher Education Institutions and their programs;

- Accreditation of new programs at accredited Higher Education Institutions;

- Continuous monitoring of Quality at accredited Higher Education Institutions.

---

[1] URL: akreditimi.rks-gov.net

Legal dispositions

The Kosovo Accreditation Agency is a public quality assessment agency in public and private institutions of higher education. Through the accreditation process, it supports the development of quality in these institutions.

The responsibilities of the KAA and the accreditation criteria are provided through the Law on Higher Education in Kosovo (No. 04 / L-037, dated 31.08.2011), Administrative Instruction on Accreditation of Higher Education Institutions in the Republic of Kosovo (Nr. 20/2016, dated 20.09.2016).

The legal[2] obligations of the Kosovo Accreditation Agency are:

- Interpret the quality criteria set by law, through the drafting of guidelines and quality standards for accreditation;

- Development of instruments for regular control of higher education institutions if the requirements (by KAA) are met;

- Active participation in projects for international cooperation in the field of accreditation and quality assurance;

- Annual reporting on its activity.

2.2 Kosovo Accreditation Agency (KAA) Digitalization Progress Since 2015

The e-Akreditimi V.1 database platform was proposed in 2015 and the system became partially operational in 2018. A website was launched at the same time.

2.3 KAA Website and e-Akreditimi Platform Updates

Recently several improvements to both the website and the e-Akreditimi platform were undertaken. One of the most significant updates that has been developed over the last few months is the new KAA website. Prior to these updates, a Google search for "Kosovo Accreditation Agency" or "KAA" would not find a link to the website. As of September 2021, the new website is now found in all search engines. It also now has a cleaner interface and is continuously populated with new data and information.

The new website is maintained by the KAA using the WordPress Platform. The web hosting is done by ASHI (Kosovo Agency for Society Information) through their own systems as is

---

[2]URL: https://akreditimi.rks-gov.net/en/about-kaa/legal-provisions-and-responsibilities/

required based on the current legislation for all national agencies. The website is fully functional and has been updated to include all information required for the functioning of the KAA. There are still some text issues on the pull down menus but nothing that interferes with existing website functions.

As part of the new website, the KAA has also added a system to issue and verify confirmations for accredited study programs for all students that have finished their studies in the accredited programs. The entire process is digitalized and allows students to receive confirmations for the accreditation status of their programs from home. The same system also allows various entities (local or international) to verify the validity of the confirmations issue using the reference numbers generated by the system. The system has been made available in mid-August 2021 and so far over five hundred (500) confirmations have been issued using the system[3].

The current e-Akreditimi platform, while it was made available to users, lacked maintenance and is now only partially functional. The system does allow for Academic Staff employed at HEIs to submit some documentation; however, some Staff members have not been able to update their materials, such as Diploma, Curriculum Vitae, on the system. Many other functions, including an older version of the accreditation confirmation system, have not been updated in a long time and have therefore been rendered useless.

One of the most concerning issues for the KAA is the conflict between the old and the new confirmation issuing systems. KAA staff have been able to do some slight SEO adjustments to make sure that the new KAA website (with a new domain) will be rendered as the top search on Google for the most relevant keywords. Unfortunately, this has caused another problem, with the search defaulting to the old confirmation system rather than the new one. This is causingconfusion among students. Currently, there are attempts within the agency to eliminate this by fixing the pointer link and redirecting it to the new system.

KAA's digitization processes have begun but needs to make progress as the research recommends.

2.4 Program Evaluation

Prior to developing a feasibility plan for future endeavors for the KAA, it was necessary to begin with an evaluation of the current systems: website and e-Akreditimi. The stakeholders were a primary source of data. These are individuals or groups that have a direct interest in and may be affected by the program being evaluated. Their opinions, based on their experiences, are key to the success of KAA's work.

---

[3] URL": https://akreditimi.rks-gov.net/gjenero-konfirmim/

<u>2.5</u> <u>Project Timeline</u>

14/9/2021	Plan data collection
15/9/21 – 17/9/21	Develop survey instrument; determine sample to complete survey
20/9/2021	Finalize survey instrument; KAA emailed link to all HEI campuses
20/9/2021	Doodle poll to stakeholders with invitation to interview (5 responses and interview scheduled; 1 did not meet with us; n=4)
21/9/21 – 24/9/21	Survey open (n=266)
22/9/2021	Develop interview questions; Develop focus group questions
24/9/2021	Create list from survey respondents to invite to focus group
24/9/2021	Finalize interview questions; Finalize focus group questions
27/9/2021	Conduct individual interviews
27/9/2021	Emailed invitations to focus group participants
29/9/2021	Conduct individual interviews
29/9/2021	Conduct focus group interviews
1/10/2021	Review survey responses
4/10/2021	Conduct individual interviews
5/10/2021	Review data collection progress
6/10/21-7/10/21	Data review and analysis
7/10/2021	Share preliminary findings with KAA and American Council
10/10/21-3/11/21	Report Writing

3. **METHODOLOGY**

We began this study with a program evaluation of the digitalization of the Kosovo Accreditation Agency's (KAA) services. These focused on the KAA website and the e-Akreditimi site.

Evaluation of programs must always include stakeholder feedback (Fitzpatrick, et.al., 2011). It was a critical first step to gather the opinions of stakeholders about the existing digitalization instruments and recommendations they may have to add services or improve the functionality of existing instruments.

Stakeholders from 31 total Higher Education Institutions (HEIs), both from the public and private institutions, across the Republic of Kosovo (RKS) were invited to participate. Thestakeholders were subcategorized by role, including Managing and Administrative staff, Academic staff, and students. To gather information from such a large population in HEIs, in a relatively short amount of time, an electronic opinion survey was necessary (Creswell & Guetterman, 2019; Plano-Clark & Ivankova, 2015).

We created an electronic survey instrument using Google Forms. We considered different electronic survey instruments and chose to use Google Forms due to the ease of accessibility and usability, the flexibility of form design and basic frequencies reporting. Given time constraints for data collection, a decision was made to create the survey in English. The overview and purpose of the survey were provided in both English and Albanian. We also offered respondents the opportunity to complete open-ended responses in English, Albanian or other language.Having the questions only in English might have limited participation, and a recommendation forfuture administration of the survey is to also offer questions in both English and in Albanian.

A link to the survey was emailed to representatives at every HEI with a request to send out to all of their constituents who fell into one of the stakeholder categories. The return rate was steady over the days that the survey was open; however, on review of the responses it seems that the targeted campus representative from some HEIs did not forward our survey link. For example, the University of Pristina (UP) had only two participants who completed the survey. Given that the UP is the largest university in the Republic of Kosovo, it was very underrepresented in the survey results. A recommendation for future administration of the survey is to re-examine the listof responsible HEI authorities who are tasked with sending emails to the campus, possibly adding a second contact for each HEI to help ensure this task is covered even during breaks in the academic terms. One concern was that this was sent during the university break when classes were not in session and faculty and students were not on campus. It may also be helpful to keep the survey open longer.

In addition to the survey, we also targeted data collection of broader feedback from individuals on their experiences with KAA's digital instruments. This was collected through individual and focus group semi-structured interviews. A semi-structured format allowed our research team to

follow participant's answers into new topics of interest, if relevant, while continuing to add and clarify information asked of all participants (Creswell & Guetterman, 2019).

All individual and focus group interviews were conducted virtually over Zoom due, in part, to continuing health and safety concerns due to the Pandemic. After having collected the data a ground theory approach is followed by the interviewee feedback to extend the study dimensions for interpretation of the result similar to the approach followed in (Nuci, 2021). Following the survey administration, we determined purposive samples of directly involved stakeholders to provide more specific and detailed feedback regarding the KAA digital instruments: website and the e-Akreditimi system. A purposive sample is one in which researchers choose specific members of a population to provide information. This type of sampling is particularly effective when there is a unique population (Denzin & Lincoln, 2011).

Once our purposive sample was determined, an email invitation went out to a list of 13 individuals to participate in semi-structured individual interviews. This email included a link to aDoodle poll to schedule interviews (September 27; 29; and October 4). There were five people who completed the Doodle poll, while four actually participated in the individual interviews. A recommendation for future interviews is to identify additional stakeholders to invite to participate. Also to offer more days and hours for interview timeslots.

Following the close of the survey, the research team reviewed the list of respondents thatexpressed interest in participating in a focus group interview and provided their email address. There were a total of 49 responses. Members of the research team selected 21 respondents to invite, based on equalizing representation across public private HEIs and HEI roles (student, academic staff, managing and administrative staff). Of this group, there were six responses. A recommendation for future focus group interviews is to schedule a second focus group interview session.

4. **FINDINGS AND ANALYSIS**

4.1 Survey

We determined that we would ask general questions of everyone, and targeted questions to different stakeholder groups: academic staff, administrative staff/management and students.

The link to the survey was sent by email from the KAA on 20/9/2021 to all HEIs in Kosovo. The survey was open from 21/9/2021 to 24/9/2021. There were 266 total responses.

A copy of the survey instrument can be found in Appendix A.

Questions Asked of All Respondents (n=266):

● Institutions (n=18)

Table 1: Higher Education Institutions participated in Survey

Frequencies of Responses	Percentage of Responses	
68	25.6%	University of Prizren "Ukshin Hoti"
39	14.7%	University of Gjakova "Fehmi Agani"
39	14.7%	Heimerer College
38	14.3%	Riinvest College
29	10.9%	University of Peja "Haxhi Zeka"
11	4.1%	UBT College
10	3.8%	University of Gjilan "Kadri Zeka"
8	3%	International Business College Mitrovica
8	3%	Faculty of Islamic Studies
4	1.5%	AAB College
2	.8%	University of Prishtina "Hasan Prishtina"
2	.8%	Tempulli College
2	.8%	Universum College
1	.4	University of Mitrovica "Isa Boletini"
1	.4	Kosovo Academy for Public Safety
1	.4	RIT Kosovo
1	.4	Biznesi College
1	.4	ESLG College
1	.4	Pjeter Budi College

Of the 31 Higher Education Institutions (HEIs) listed, only 18 HEIs are represented in the survey. This means that there were no responses from 12 of the HEIs. In addition, many of the HEIs that did have participants, some of them were very under-represented. One of the most obvious examples is the University of Prishtina "Hasan Prishtina" which had only two responses.

- Academic Staff Respondents: Primary Engagement

  Frequencies of Responses:
  Computer Science = 17; Business = 7; Philology = 7; Education = 5; Law = 5; Medicine = 4; Agribusiness = 4; Tourism & Hospitality = 3; Life & Environmental Science = 2; Applied Science = 1; Engineering = 1; Art = 1

- How much do you know about the Kosovo Accreditation Agency (KAA)?

Table 2: KAA known in public

Frequencies of Responses	Percentage of Responses	
134	50.4%	A Little
107	40.2%	A Lot
25	9.4%	Nothing

Most respondents (50.4%) knew at least "a little" about the KAA. The 9% who said that they knew "nothing" about the KAA were Bachelor's students. The students at the HEIs, especially the Bachelor's students, are one group that should be targeted for outreach to provide information about the KAA.

- How common is your contact/communication with KAA?

Table 3: Frequency of communication

Frequencies of Responses	Percentage of Responses	
127	47.7%	Never
108	40.6%	Sometimes
31	11.7%	Continuous Basis

The majority of respondents (52.3%) replied that they communicate with the KAA either sometimes or on a continuous basis.

- What is your main reason for communicating with KAA?

Table 4: Reason of communication with KAA

Frequencies of Responses	Percentage of Responses	
108	40.6%	Do Not Communicate with KAA
85	32%	Accreditation Process
47	17.7%	Checking for Accredited Programs
20	7.5%	Confirmations of Accreditation
6	2.2%	Other Responses

Of the student respondents (n=127) who responded to this question, indicated that their primary reasons were: checking for accredited programs (17.7%) and confirmations of accreditation (7.5%). This supports the idea that students at the HEIs need more information about the KAA and its functions that are related to them.

- How do you communicate with KAA?

Table 5: Ways of communication with KAA

Frequencies of Responses	Percentage of Responses	
115	43.2%	Do Not Communicate with KAA
63	23.7%	E-Mail
47	17.7%	Website
13	4.9%	Social Media
8	3%	Mail
4	1.5%	Phone
16	6%	Other Responses

Of those respondents that indicated they communicate with the KAA, the majority (23.7%) do so by email. Surprisingly, only 4.9% use social media with 4.5% using traditional communication tools such as phone and mail.

- What is your role within the institution? (Screening question)

Table 6: Roles of participants

Frequencies of Responses	Percentage of Responses	
126	47.5%	Students
88	33.1%	Academic Staff
29	10.9%	Administrative Staff
22	8.3%	Management Staff
1	.2%	Other Responses*

*this person answered the "student" questions. Therefore student respondents n=127.

The survey targeted all HEI stakeholders: students, academic staff, administrative staff and those at the management level. The student participation, especially among Bachelors students, is robust. This is helpful in understanding student opinions on the targeted questions; howevergiven the low participation rate of survey participants, this may oversample students on the general questions on the survey.

Targeted Questions (based on screening question):

- For Students (Bachelor, Masters, PhD): n=127
  - o Have you consulted any KAA instruments with regard to your study decision?

Table 7: Communication between student and KAA prior to the study decision

Frequencies of Responses	Percentage of Responses	
112	88.2%	No
15	11.8%	Yes

There is a small percentage (11.8%) of students that consulted the KAA regarding their program of study. This provides additional support for the idea that the KAA needs to reach out more to students to let them know about available services and the importance of quality assurance and accreditation of academic programs.

o   If you did consult KAA, how satisfied were you with the results?

Table 8: Communication satisfaction level of students with KAA

Frequencies of Responses	Percentage of Responses	
103	81.1%	Did Not Consult KAA
17	13.3%	Very Satisfied or Satisfied
7	5.5%	Somewhat Satisfied or Not Satisfied

Of the students that did consult the KAA regarding their program of study, the majority (13.3%) felt "satisfied" or "very satisfied" with the experience.

Of the students (5.5%) who were only "somewhat satisfied" or "not satisfied," one open-ended response supports the idea that students are not aware enough of the KAA:

- *Because I didn't know I can communicate with it and how to*

Of the students (13.3%) who were "satisfied" or "very satisfied," some selected open-ended responses included:

- *I looked if my college was accredited then I chose that college. If it was not accredited I wouldn't chose it* [sic]
- *Looking up to KAA and finding which faculty and programs are accreditation I think it's very important to learn every student* [sic]

Despite challenges, a significant number of student participants (95.3%) think that accreditation is important to the quality of their education

The margin was a little closer on the question: I believe that my voice has been heard and I feel that I am an integral part of the higher education system.

- No = 46 (36.2%)   Yes = 81 (63.8%)

It is important for stakeholders to feel that they are a part of the system. This will strengthen their buy-in and support for the system. This stakeholder/user support will help drive the success.

● For Academic Staff: n=88

o   Please specify the primary program in which you teach.

Table 9: Academician participants linked with the programs

Computer Science
Food Technology
Academic Writing
Agribusiness
Albanian Language and Literature
Architecture
Biology
Business
Law
Economics
Education
English Language and Literature
Environmental Science
Medicine
Islamic Theology

A broad range of programs were represented by the Academic Staff members who participated in the survey.

- o For how long have you been engaged as an academic staff member in Kosovo Higher Education Institutions (HEI)?

Table 10: Academician participants engagement in HEI

Frequencies of Responses	Percentage of Responses	
3	3%	Less than 1 year
7	9%	1 to 2 years
15	17%	3 to 5 years
23	26%	5 to 10 years
37	42%	10 to 20 years
3	3%	20+ years

o Have you been engaged in accreditation processes within your institution?

Yes = 80 (91%)   No = 8 (9%)

o   Which online services of the KAA do you use? Select all that apply.

Table 11: Services used in KAA

Frequencies of Responses	Percentage of Responses	
33	37.5%	E-Akreditimi
12	13.6%	E-Akreditimi and Website
10	11.4%	E-Akreditimi, Website, and E-Mail
9	10.2%	Website
8	9.1%	E-Mail
2	2.3%	Social Media
14	15.9%	Other Responses

The Academic Staff respondents mainly use the E-Akreditimi services. A nearly equal number of people use the Website and the E-Mail. Interestingly, few people used Social Media Services. This knowledge may be helpful when prioritizing updates based on the platform usage.

● For Management and Administrative Staff: n=51

o   Specific Role within the institution

Table 12: Participants management roles

Frequencies of Responses	Percentage of Responses	
26	51.1%	Upper Management (i.e., Rectors, Deans, etc.)
9	17.6%	Quality Assurance Office
7	13.6%	Student Services
2	4%	Career Development
2	4%	IT
1	2%	Program Coordinators
4	7.7%	Other

o   How engaged are you at your institution in the quality assurance/accreditation processes?

Table 13: Participants engagement in HEI

Frequencies of Responses	Percentage of Responses	
31	67%	Very Engaged or Engaged
17	33%	Somewhat Engaged or Not at all Engaged

Of the Management and Administrative Staff respondents (67%) who were "Engaged" or "Very Engaged," in Quality Assurance/Accreditation processes, some selected open-ended responses included that were representative of the responses:

- *The experience so far is positive. KAA Secretariat is always accessible and they reply to our mails regularly.*
- *Since the beginning of the accreditation process in 2011 I have been engaged in this process and I am in contact with the AKA.*
- *We do internal quality assurance based on our internal manual and standards every year as opposed only to external accreditation requirements. Thus the experience is relaxing and comforrable with KAA* [sic]

General Questions asked of all stakeholders (n=266):

- Experience with KAA Digital Instruments
    - o Have you utilized any of the current KAA digital instruments?
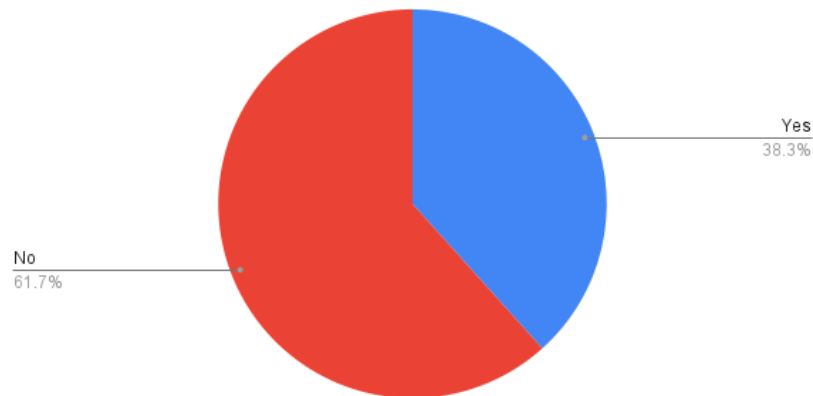
Figure 1: KAA digital instruments utilised from participants

This finding seems somewhat incongruous considering the previous responses about user experiences. It may be that respondents were confused about the phrase "Digital Instruments." It was hoped that it would be clear from the specific instruments/tools that appeared in the next questions (i.e., Website and E-Akreditimi system).

Those who responded in the affirmative that they had used the instruments (n=102) were then asked to provide feedback on their experiences.

- Feedback on KAA's current digital instruments
    - Have you visited the new KAA website?
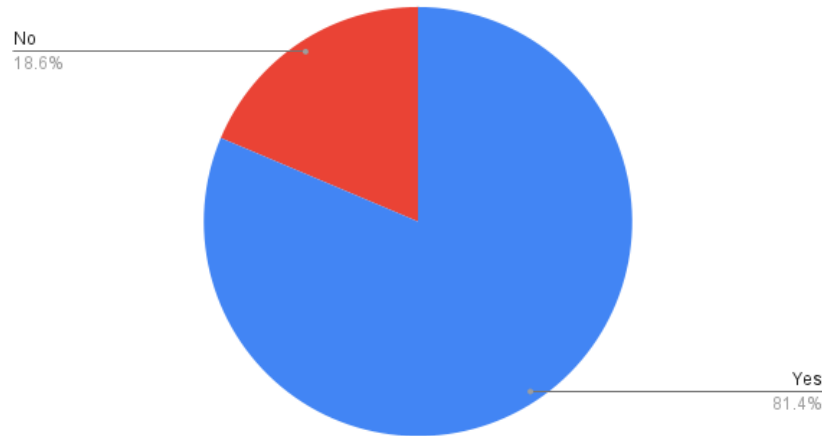
Figure 2: KAA website visited

Those who responded in the affirmative that they had visited the new KAA website (n=83) were then asked to provide feedback on their experiences using the website.

- Website and Online Instruments Rating: (n=83)

Table 14: Usability of the KAA website

	Very Satisfied or Satisfied	Somewhat Satisfied or Not Satisfied
Easy to Access	69 (83%)	14 (17%)
Easy to Use	68 (82%)	15 (18%)
Relevant information provided	62 (75%)	21 (25%)
Management of Information	58 (70%)	25 (30%)
Access to Local Languages	58 (70%)	25 (30%)
Overall usability rating	73 (88%)	10 (12%)

The majority of respondents were very satisfied or satisfied with the new KAA Website. The satisfaction level did show a drop in three areas: Access to Local Languages; Management of Information; and, the Relevant Information Provided on the site. These are areas that may be targeted for further Website revisions.

- Could you please rate the following aspects of the new KAA Digital Instruments (including e-Accreditation): (n=83)

Table 15: Usability of the KAA eAkreditimi

	Very Satisfied or Satisfied	Somewhat Satisfied or Not Satisfied
Easy to Access	67 (81%)	16 (19%)
Easy to Use	66 (80%)	17 (20%)
Need for technical support to use	55 (66%)	28 (34%)
Information provided	61 (73%)	22 (27%)
Management of Information	61 (73%)	22 (27%)
Design of User Interface	56 (67%)	27 (33%)
Access to Local Languages	67 (81%)	16 (19%)
Overall usability rating	65 (78%)	18 (22%)

The majority of respondents were very satisfied or satisfied with the new KAA Digital Instruments, including the E-Akreditimi system. The satisfaction level did show a drop in four areas: Need for Technical Support to Use; Design of the User Interface; Information Provided, and Management of Information. As the updates/upgrades for the E-Akreditimi system areconsidered, it may be helpful to focus some of the work in these areas.

- Are you aware the domain/URL of the KAA website has changed recently? (n=83)
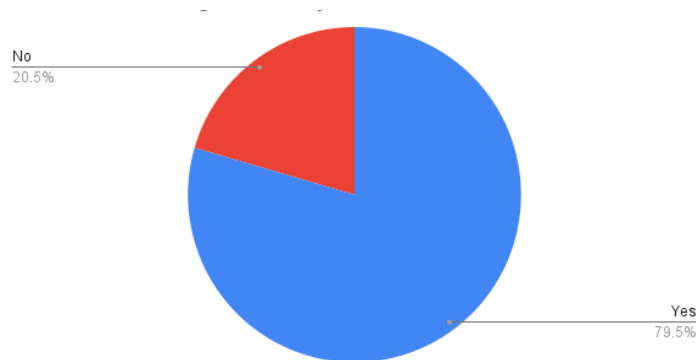
Figure 3: KAA URL website changes

It may be significant that over 20% of respondents were not aware that the Website domain/URL had changed. The communication around this should probably be increased, possibly an announcement sent to stakeholders with the announcement.

- Participants who responded that they have not used KAA Digital Instruments (n=164)
  - Why have you not used any KAA digital instruments? Check all that apply.

Table 16: Reasons of not using KAA services

	Responses
Concern with Data privacy	4 (2.4%)
Not aware they existed	84 (51.2%)
Did not need to use them	60 (36.6%)
Too complex to use	4 (2.4%)
Experienced technical issues	12 (7.3%)

The primary factor respondents identified for not using the KAA digital instruments is that they were not aware they existed. There may be a need to send more direct communication to stakeholders about the availability of the [new] Website and the E-Akreditimi system, especially as it is updated/upgraded. This would also help address the concern for 7.3% of participants who said that they did not use the tools because they had "Experienced technical issues."

- General Satisfaction Rating
  - Overall, how satisfied are you with the KAA?

Table 17: Level of Satisfaction with overall KAA collaboration

Frequencies of Responses	Percentage of Responses	
23	8.6%	Not Satisfied
43	16.2%%	Somewhat Satisfied
140	52.6%	Satisfied
60	22.6%	Very Satisfied

An important finding of this survey is that the majority (75.2%) of the total respondents (n=266), are "Satisfied" or "Very Satisfied" with the KAA. This is an important achievement. That said, there are almost 25% of respondents who are only "Somewhat Satisfied" or "Not Satisfied." Addressing the concerns of those stakeholders should be a focus for the KAA.

o Do you agree with the following statement: I feel that my information and data is secure and kept confidential by the KAA.

No = 41 (15.4%)   Yes = 225 (84.6%)

o Do you agree with the following statement: I feel that I am a valued partner in the higher education system.

No = 50 (18.8%)   Yes = 225 (81.2%)

o Do you feel that your feedback from the past has been heard and/or acted upon by the KAA?

No = 27 (10.1%)   Yes = 75 (28.2%)   Not Sure = 164 (61.7%)

4.2 Individual Interviews:

Following the ground theory approach similar to (Nuci, 2021), the data collected from the interviewee feedback is summarized in the first column of Figure NN. The second column is derived as new features proposed from the summarised data of the first column, which then in the third column were associated with one of the systems that KAA uses in order to provide their services to all the stakeholders. As shown in Figure 4, the interviewee feedback tackled mainly the KAA website and e-Akreditimi platform as separate systems.

With respect to KAA website, the new features derived from the data are as follows:

- All published decision for accreditable programs/institutions should be searchable
- All accreditable programs/institutions should be searchable
- The expert evaluation reports should be visually linked with respective programs
- The KAA should provide a matchmaking mechanism for recommending accreditable programs based on the users interests expressed through search keywords
- The KAA website should offer for each accredited institution an open profile description, which then for other details will suggest the users to access the respective institutions website
- The KAA website should offer for each accredited institution and program a ranking mechanism including expert feedback, research results, number of full time professors, number of accredited programs, number of students, to name a few
- The KAA website should offer the possibility to generate customisable statistics (selection of ad-hoc variables)

Summary of discussion

- Lack of information for HEI and their program in searchable manner and not only as documents (PDFs)
- Continual communication request from parents with respect to program validity
- There are many people that request the information whether the institution or program is accredited
- I would like to have information from KAA as a trustworthy source for Universities and their accredited programs and then continue with external link that directs me to respective institution
- The website was chaotic and not interactive, in a sense that we can not find data or extract any potential statistics
- Monitoring of HEI through students and parents
- External Expert Evaluation during institution and program re/accreditation should contribute into institutions reputation
- We communicate with the KAA for different purposes (Board decisions, accreditation processes, projects, other documents - to name a few)
- We communicate with KAA through phone, emails, social media and/or in-person
- The eAkreditimi should contain all the communication that we perform through email, phone, paper. So the communication is within the system but we need just to change sequences and privilages depending on the level of communication (similar to ERP system, issuing a case/ticket number and monitor the progress with notifications until it is closed as a case)
- The communication with the agency sometimes is delayed and in some cases we wait more then we expect (no deadlines are specified and we think that 24 hour is sufficient enough to respond).
- All information with respect to eAkretimi should not be updated even if we dont have any changes on our profile.One click confirmation is enough.
- We experience a lot of downtime of eAkreditimi system once we want to update our documentation as required by the agency
- The current eAkreditimi i not fully functional. The reset password is not functional. The system during the declaration time experience downtime.
- Sharing the information among public eServices and not demanding the same data from different government agencies

Features

- Searchable accreditable programs
- Searchable expert suggestion from decision reports
- Personalised recommender for potential future students
- Accreditated HEI Open Profiles
- Costumized statistics generation
- HEI Institution rating
- HEI Program rating
- Applying online for program ri/accreditation
- Applying online for Institution re/accreditation
- Validation of program holders
- Case-based Communication
- OneClick data confirmation
- Creating APIs for specific purposes
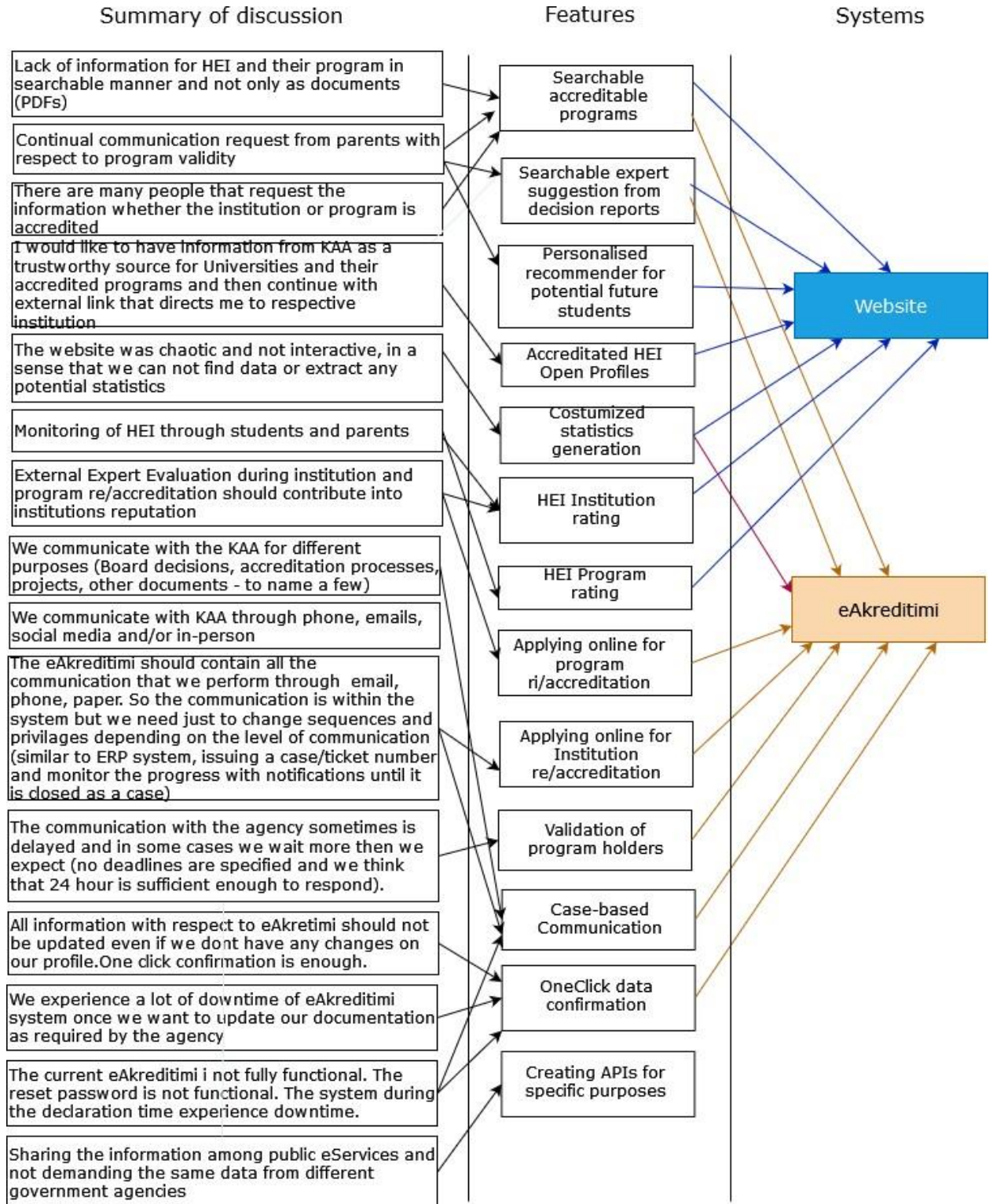
Systems

- Website
- eAkreditimi

Figure 4. Qualitative analysis of the interviewee feedback

With respect to e-Akreditimi system, the new features derived from the data are as follows:

- The e-Akreditimi should behavior similar to case-based system, in a sense that the whole pipeline of the communication processes should reflect in various user classes
- The e-Akreditimi should archive and reflect the communication progress independent of staff movements
- All published decision for accreditable programs/institutions should be searchable
- All accreditable programs/institutions should be searchable
- All declared professors profile should be searchable
- The e-Akreditimi should offer the possibility to apply online for institution ri/accreditation
- The e-Akreditimi should offer the possibility to apply online for program ri/accreditation
- The e-Akreditimi should validate the program holders for each program
- The e-Akreditimi should provide a progress bar communication with stakeholders
- The e-Akreditimi should provide notification once the communication period specified with respective national law and administrative instruction with respect to specific user classes
- The e-Akreditimi should provide a oneClick declaration button for all full professors that have not experienced any changes in their documentation portfolio
- The e-Akreditimi should provide API for communicating with KRIS platform and other national agencies platforms
- The e-Akreditimi should replace the paper-based/email-based communication with respect to institution/program re/accredtiation up to 99%.

A copy of the interview questions can be found in Appendix B.

4.3 Focus Group Interviews:

For focus group data a content cloud as a method of exploratory qualitative data analysis is used similar to (Cidell, 2010). Through content clouds the authors tend to emphasize visually the words that appear most frequently in the discussion with the focus group using python libraries. Figure 5 visually summarizes that the discussion has been mainly focused on institution, website and accreditation. Further, the second layer of visualisation capture the discussion with respect to people, processes, experience and decisions. So, with the website the participants ask for the content architecture to flat and simple, whereas for e-Akreditmi (eAccreditation) system the participants emphasise the need for removing the unnecessary input fields that are not applicable in some user classes. The e-Akreditmi should suggest the decision for program holders based on the document evidence it has, and here the people and its experiences need just to validate the system decisions.

In addition the participants were complaining about the eAkrdimiti system that each year, in the same period of time (October 1-31) the system experiences downtime and the full professors experience difficulties to upload their commitments/declarations for their respective institutions. Each time a user in e-Akreditimi forgets their login credentials, the system does not provide the possibility to reset the password, and this decreases the users satisfaction with respect to the use of the system.

Figure 5: Content cloud derived from Focus group discussion

A copy of the interview questions can be found in Appendix C.

49 responses on survey, 21 invited (based on equalizing representation across public private HEIs and HEI roles (student, academic staff, managing and administrative staff), only 6 acceptances.

5. CONCLUSIONS AND RECOMMENDATIONS

Digitalization is a dynamic process, once begun, services and access must continuously increase and improve. Stakeholder expectations will consistently and continually rise. Further, stakeholders are essential in building and improving digitalized processes. They must feel that their voices are heard by the organization. This helps the agency provide transparency. Digitalization should be a high touch undertaking.

According to the survey, interview and focus group results, there is support for digitalization; however there are areas of concerns.

5.1 Support for Digitalization

Survey respondents wrote of their support for digitalization:

- *More digitalization required*
- *Digitalization should be next steps to get better performances in the era of Technology*
- *All processes to be more effective and useful*
- *To be part of european or other accredited institutions around the world* [sic]
- *All of the programs should be in the digitalisation process.*
- *Digitalization of KAA is very useful for students*
- *Digitization as much as possible*
- *To be more transparent*
- *The reason why is useful is because we can check before applying for colleges*
- *Digitalization is important for higher education institutions and KAA*
- *Important for information*
- *digitalization will always be a part of our life therefore starting early will be in our benefit as a society. My only concert will be the safety of the data.* [sic]
- *Everything is ok,just go further*
- *Evidence based*
- *the digitaliyation will facilitate the evaluation and accreditation procedures* [sic]
- *To bee concretely in request about the changes in academic situation* [sic]
- *The change in academic level is better for future*
- *Needed all the processes to digitalise* [sic]
- *I think the process of digitization of KAA to be done on a level with my western institutions*

5.2 Changes in Digitalization Processes and Systems

Respondents listed the need for specific changes in digitalization processes and systems:

- *obsolete in the very near future. Perhaps, submission via email or some other secured-process uploading of documents is far better.*
- *Digitalization should be expanded to more operations of KAA not only for the declaration of academic staff. A good idea would be digitalization of application process and submission of SER.*
- *Make sure that the needs and recommendations given by non-public institutions are taken into consideration for better functioning of the KAA*
- *Digitalization of all documemts is more than necessary* [sic]
- *In the future, requests for CSCs to be made electronically*
- *Deliveries to KAA to be received via email*
- *For example, when submitting SER we have to submit both hard-copies and CDs. CDs will become* [sic]
- *prefer to use different applications, direct acces.* [sic]

- *All forms of communication should be digitalized, including requests, filling in forms, study programs representatives could be appointed on the platform, hard copies shouldbe fully avoided. A functional platform could ensure quality, transparency, effectiveness, decision making...* [sic]
- *All processes to be more effective and useful*
- *I suggest creation of a detailed and digitalized list of the subjects/courses for each study program accredited by the AKA, including all academic staff members responsible for each subject/course of the study program.* [sic]
- *A chat box to speak directly to the KAA official will be necessary. This is an important feature as it would expedite the process of receiving answers. Moreover, this is profoundly important if you want quick answers, but at the same time to have proof of communication which could be tracked. This channel of communication compliments the phone in case of any misunderstanding regarding the feedback that are left in the mercy of he-said/she-said if possible problems regarding the interpretation of phone conversation arise.*
- *Should be fully confidential and each academic staff to have access with password individually.* [sic]
- *Digitalizing the process of writing the Self-Evaluation Report for accreditation andre-accreditation purposes and the submission of documents.*
- *To show the accredited programs real time*
- *Online publication of Bsc. Msc. dhe PhD degrees, for each academic staff.*
- *Higher level of direct communication with HE management and academic staff through different communication channels.*
- *Digitalization of every process of accredity* [sic]
- *Timely response and non-delay of the process*
- *Better management of digital documents, staff documents which were sent the previous year should not be required again, but only fill in the new staff documents*
- *Decisions should not be made ad-hoc during the academic year, because they are presenting problems for institutions but also students. Decisions must be made for the next academic year in which case the educational institutions will be able to reflect onthe requirements of AAK*
- *When we register engagements there is no possibility to register subjects or multiple departments we may teach. We do not have a chance to write how many hours for teaching, research and other activities allowing KAA to have an overview of staff engagement.*
- *KAA could use accreditation reports to display readable results and comparisons for the public.*
- *Precise determination of standards for accreditation of study programs.*

- *Measuring the impact of standards for accreditation of study programs in the development of student competencies.*
- *I would suggest to digitalize all information regarding academic staff, including subjects we lecture and the schedule of the lectures, per semester, not only the documents.*
- *More digitalized process of evaluation of programs, such as syllabuses and other material* [sic]
- *Accessibility to information, easy and immediate communication and ability to share information, new jobs*
- *Submission of documents for evaluation online and better digitalized communication with experts of evaluation*
- *Collaborate more with universities on accreditation criteria*
- *Post monitoring process of the accreditation to be digitalized and used.*
- *The oversight of programs at higher education institutions in Kosovo should be done on a more regular basis.*
- *There are cases when our CV has to be updated or changed, or when we get an nostrification of a degree from abroad, but we can't add the document for more than 11 months to our profile!* [sic]
- *Fixing technical issues*

5.3 Valued Stakeholders

Respondents also expressed appreciation for being included in the process and feeling valued as a stakeholder. Also a desire to improve this connection:

- *thank you for reaching out to the students, and i would like to be more informed about KAA*
- *because it is so important and so I think the KAA should find a flexibile way to transport this info to the students* [sic]
- *I think is cool because we can express our thoughts better here*
- *I am very happy that out voice is being heard that we are also asked for this*
- *Make sure you listen to what the students have to say!*
- *They should provide students a space to hear their suggestions and/or complaints about the overall quality of academic education.*

5.4 Need for support

Some survey respondents expressed the need for more support:

- *The Accreditation Standards Manual is very complicated and often unclear*
- *Clearer instructions should be given to professors so that the systems are more useful for the students.*
- *KAA should conduct consultations before approving new manuals and regulations.*

- *Provide more video, audio or written tutorials in regards to the digitalization. Possibly a training in the future staff need to updated for news in the digitalization process*
- *More cooperation*
- *To give us any information more early*
- *closer cooperation with universities*
- *Engage academic staff for specific information, such what are technical obstacles* [sic]
- *To be the process of accreditation more accurate, there is a need for more specific analysis of programs and materials used in reports*
- *Invest in the sustainability of the organization*
- *More interactivity with academic staff.*
- *We need more support,more collaboration for process of accreditation,new roles ang obligation* [sic]
- *Changes in status of programs should be communicated by email to academic staff involved in that program*

5.5 Communication

One of the main concerns expressed by survey respondents is a need for more communication about the KAA and accreditation processes:

- *It needs more promotion*
- *Show us who you are and what you can do; how you can help and how to communicate with you*
- *I think this process should be heard more because I wasn't aware about it before*
- *More marketing on social media, that all the student can hear about KAA* [sic]
- *There should be places where you can search if your institution is accredited or not. If there is, lists should always be kept updated.*
- *It's the first time im hearing about KAA I just had no idea there was an institution dedicated to helping students consult about there future but I guess if theres events that you can invite me too it would be good enough* [sic]
- *I would like to know more about them, so we need a campaign with information about KAA* [sic]
- *More advertisement and notification*
- *More interconnectivity with academic staff*
- *Staff need to be updated for news in the digitalization process*
- *I would like to know more about them, so we need a campaign with information about KAA*
- *I thing its the the info about acredition is the main part who every student should know about that* [sic]
- *Constant communication with KAA and better information of academic staff.*

5.6 KAA Staff

The eight members of the KAA staff are very hardworking and conscientious. They respond to user correspondence (email, phone and mail) and address technical problems as they can. Each person "fixes" individual issues as they are able. However, this piecemeal approach can be inefficient. This may also lead to frustration among users and stakeholders.

Respondents to the survey made these suggestions:

- *Better feedback from IT Company when there are technical problems* [sic]
- *The increase of the staff for KAA to handle the daily workload* [sic]
- *Do not change so often members of KAA*
- *Increase the human capacity in the agency and merit-based employment*

Rather than increasing the number of staff, it may be better to add a project manager. That person will have a big picture of all of the needed updates for the entire system, prioritize them, and assign staff members to do the work. This will avoid redundancy and increase efficiency.

5.7 Website

The KAA Website was recently updated, and the URL changed. Many of the stakeholders we surveyed did not seem to be aware that there was a new website. It may be helpful to send an announcement out to stakeholders with the new URL.

Many of the survey respondents recommended:

- *better website*
- *all details should be in WEB*
- *Translating the content of the website in local languages as well. If it already is translated, I could not find the way how to have access to that. Thus, if the option is possible it should be more visible.*
- *To be more user friendly*
- *I can't think of any right now, but before a while they put a website where you can check the accreditation of your study program, and it was a really good thing.*
- *You can't find Riinvest College in the website*

Another website related issue is the "user friendliness." From the interviews, participants commented on difficulties navigating the website. They mentioned parents who may be trying to navigate the site to help their children make a decision about a degree program. Parents may not be as comfortable overall using technology and digital tools as their children. A more target experience for students and their families may improve the usability.

The website needs to be reconsidered in terms of the users – who is the primary target audience of the website? The design should flow from that. It is also important that the website be appealing and user friendly.

5.8 e-Akreditimi (v.1) System

The e-Akreditimi system that was proposed in 2015, and partially implemented in 2018, needs to undergo major revisions or replacement.

As of 7/10/2021, these are the main issues affecting the system:

- Resetting emails - Done manually by the KAA staff

- Creating new accounts has issues

- Functions for the adding of schedules and subjects seem functional but have never been used

- The functions for the academic staff to put in their engagements is quite buggy and difficult to navigate if corrections need to be made

- Confirmation system has never been updated since the initial set up of the system, as is true for general information about the HEIs and their study programs

- Creating new users to the system does not seem to work at the moment

- User interface is generally outdated and not very modern, and in many locations difficult to navigate for all levels of user (HEI Admins, Academic Staff, and Super-Admins from the KAA)

- There are more smaller bugs that are also affecting the functionality of the system

Many respondents commented on problems with the e-Akreditimi system:

- *Improve the technical aspects of the e-akreditimi platform.*
- *E-accreditation should be accesible 12 mounths of the year*
- *You have to make it more easy und more uncomplicated for use*
- *E-accreditation to work faster and better*
- *E-akreditimi to enable more statistical outputs production from its users* [sic]
- *Activate the part for applying for accreditation online also on the e-accreditation platform.*
- *On the e-accreditation platform there are difficulties in restarting the password (not always is an function).*
- *Som functions of e-Akreditimi must be open all the time, like adding new documents in the personal profile* [sic]

The problems are significant. Problematically, the original design team is no longer available to service the product and there are significant issues related to the source code. A patchingapproach may cause more problems than it solves. Also, with the hardware upgrades and updatesthat are needed for security, a new system would certainly run more efficiently than one initially designed over six years ago and never actually completed or fully implemented.

5.9 Recommendations for Hardware Upgrades

Previous hardware recommendations for the E-Akredimit system were made in 2015. Based on that specification report (p. 22), the following are recommendations for hardware upgrades that might be considered, especially given concerns for system stability and data security.

- Rather than having only two servers for application and database there should be four servers for redundancy and failover option.
- The configuration shows that the database server is also a file server with a 8x3Tb SAS hard drives (RAID). Preferably the database server should only be a database server and the RAID file server should be an independent server (with a backup).
- Ideally you would have the four servers: an application server, a database server, spare failover, and a RAID file server (with a redundant duplicate). With this configuration, there would be a single backup server which in the event of a failure, could replace either application or database server since they are similar in configuration.
- Consider SSD hard drives rather than SAS/SATA.
- The Intel Xeon processors are out of date (https://www.intel.com/content/www/us/en/products/details/processors/xeon/scalable.html). This should be upgraded to something in the Intel silver category with at least 8 cores and 3+Ghz speed.
- An additional RJ-45 Gigabit Ethernet port should also be added for redundancy.
- The operating systems: Windows server 2008R2/2012R2 is also very out of date. With the new 2022 version being rolled out, this older version is a security risk.
- The Red Hat Enterprise Linux version 8 is current with version 9 rolling out soon.
- The SUSE enterprise server is currently on version 15.

5.10 Conclusions

The current version of the e-Akreditimi (e-Accreditation) v.1 system is plagued with a large number of bugs that affects stakeholders. Problems include:

- document uploading
- modifying engagement declarations
- creating new user accounts
- resetting passwords
- confirmation system never updated
- user interface is difficult to navigable

- matching the program with program holder
- lack of faculty-student quota data
- inability to search for accredited programs and institutions
- inability to apply for [re]accreditation
- inability to directly upload institutional information for [re]accreditation
- academic staff members are required to re-enter information even if nothing has changed

The existing system will be fully reviewed to see how basic functions that should be available to users can be resolved. Following this review, there will be a determination of how the system should be updated/rebuild in order to make that happen.

6. REFERENCES

Andreessen, M. (2011). Why software is eating the world. [Online] *The Wall Street Journal*. Source https://www.wsj.com/articles/SB1000142405311190 34809045765122509156629460.

Cidell, J. (2010). Content clouds as exploratory qualitative data analysis. *Area*, *42*(4), 514-523.

Creswell, J. & Guetterman, T. (2019). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research*, 6th edition. Pearson.

Denzin, N.K. & Lincoln, Y.S. (2011). Introduction: The discipline and practice of qualitative research. In N.K. Denzin & Y.S. Lincoln (eds), *The Sage Handbook of Qualitative Research* (4th edition; pp. 1–19). Sage.

Fitzpatrick, J. L., Sanders, J. R., & Worthen, B. R. (2011). *Program Evaluation* (4th Edition). Pearson Education (US).

Ilcus M. (2018). Impact of digitalization in business world. *Review of International Comparative Management*, *19*(4), 350-358.

Nuci, K. P., Tahir, R., Wang, A. I., & Imran, A. S. (2021). Game-based digital quiz as a tool for improving students' engagement and learning in online lectures. *Ieee Access*, *9*, 91220-91234.

Plano-Clark, V., & Ivankova, N. (2015). *Mixed Methods Research: A Guide to the Field*. SAGE Publications, Inc. (US).

Ranerup, A. & Henriksen, H. (2019). Value positions viewed through the lens of automated decision-making: The case of social services. *Government Information Quarterly, 36*(4).

Saldana, J. (2021). *The Coding Manual for Qualitative Researchers*, 4th edition. Sage.

Urbach N. & Röglinger, M. (2019) Introduction to digitalization cases: How organizationsrethink their business for the digital age. In: Urbach N., Röglinger M. (eds) *Digitalization Cases. Management for Professionals*. Springer. https://doi.org/10.1007/978-3-319-95273-4_1

7. APPENDICES

A. SURVEY INSTRUMENT

B. SEMI-STRUCTURED INTERVIEW QUESTIONS

C. FOCUS GROUP INTERVIEW QUESTIONS

APPENDIX A

APPENDIX B

Appendix C