WHITE
PAPER
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Erasmus Without Paper Back to the Future

STUDENT MOBILITY SUMMIT
EWP BACK TO THE FUTURE

erasmus
without paper

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Introduction

Erasmus Without Paper (EWP) has been initiated a bit more than 10 year ago by a group of higher education institutions to meet an ever-growing workload in the field of student mobility as well as further enhance the mobility experience. In December 2018, EWP was first officially unveiled to the world and 5 years later almost 100% of higher education institutions involved in study mobility have connected their systems to EWP. This has allowed International Relations Officers (IROs) to take the first steps in switching from paper-based to digital administration of mobility. This is a momentous and structurally challenging transition, nonetheless one through which Europe has already equipped itself with the world's most advanced digital ecosystem for student mobility!

The rollout of EWP to the higher education community has provided the oppportunity to indentify three key considerations for the success of the digitalisation process:

- Firstly, EWP is a decentralised digital infrastructure, whereby higher education institutions decide which IT tool they want to use to exchange data with their partners (henceforth called nodes). Erroneous or incomplete implementation of the EWP Network specifications by some nodes has led to increased workload of IROs in charge of handling student mobilities, resulting in a slow-down of the implementation of EWP. The ecosystem will therefore need to transition from a trust-based to a compliance-based network.

- Secondly, clear communication towards the community is required to ensure that milestones are achieved in a timely fashion, and the stakeholders can plan and act accordingly.

- Thirdly, the business processes underpinning Erasmus+ mobilities ought to be both simplified and stabilised to create the conditions for stable implementation of the digital ecosystem by the higher education community.

For many IROs working on the renewals of Inter-institutional Agreements the period that followed their digitalisation can be qualified at best as arduous, as illustrated by the EWP Assessment Reports[1]. The challenges intrinsic to the digitalisation transition have been compounded by successive crises faced by higher education institutions (e.g. the covid-19 pandemic diverted significant IT

Key Considerations for EWP Implementation

Transition from a trust-based to a compliance-based network.

Clear communication.

Simplification and stabilisation.

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1. See more information here: https://erasmus-plus.ec.europa.eu/news/erasmus-without-paper-shows-smoother-data-exchanges-but-work-needed-to-improve-digital-processes

Do you agree that the digitalisation efforts underway to facilitate digital administration of Erasmus+ student mobilities need to be further developed?

399 answered

Strongly agree   (213/399) 53%

Agree   (147/399) 37%

Neutral   (31/399) 8%

Disagree   (8/399) 2%

Strongly disagree   (0/399) 0%
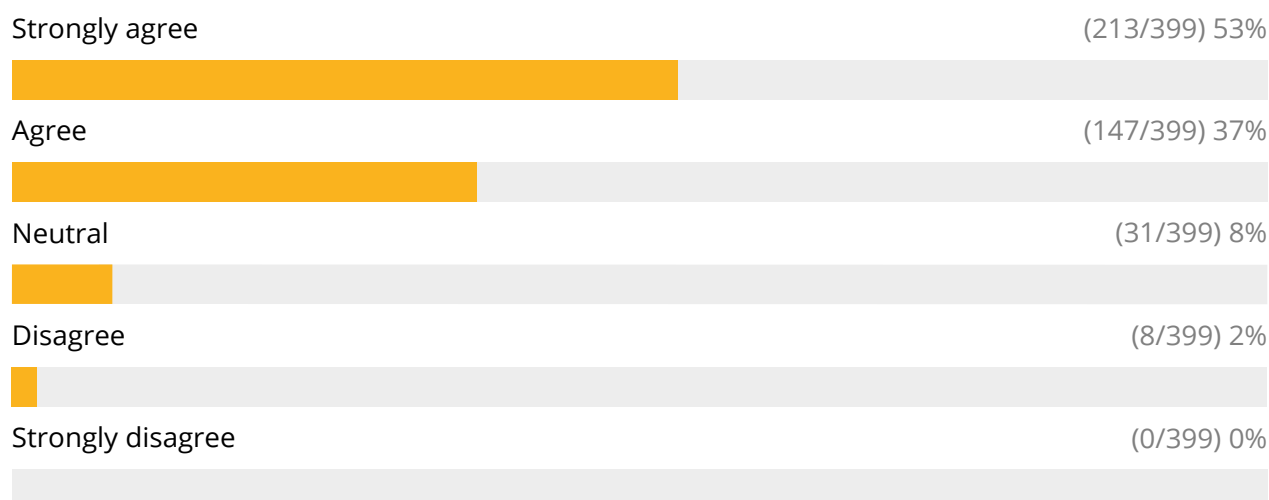
Figure 1 - Survey on commitment to pursue digitalisation of Erasmus+ (June 2022)

resources, new programme implementation was quite demanding, and geopolitical challenges have also played a role). Despite all these difficulties, colleagues throughout Europe remained steadfast in their belief that digitalisation is a worthwhile and vitally important endeavour. The figures above illustrate the sentiment of the community towards the digitalisation of Erasmus+ at the peak of the digital interoperability issues in 2022/23.

We have looked back at the efforts deployed to achieve this digital transformation process, the challenges encountered, and the mitigation measures applied, and we have learned a lot to inform the direction of the digitalisation process at hand. We have led numerous discussions with EUF members, partners, and stakeholders seeking out answers to

What is the best we can do for every IRO and every mobile student in Europe?

Early on in our discussions, the key answers pointed to a large consensus on bringing about **efficiency gains** for IROs. Accordingly, this White Paper outlines recommendations from the community on how existing Erasmus+ processes should be simplified and re-designed in a digital context. Such endeavour is necessary to set out the next steps in the digital transformation process in a **positive, ambitious yet realistic** way.

These consultations have been extended beyond the EUF network through a series of events organised in 2023 and 2024. We are indebted to the Erasmus+ National Agencies in Spain, Portugal, the Netherlands, and Germany, as well as the Polish IRO Forum, for their invaluable assistance in disseminating the EWP Community meetups. We would also like to thank the University of Vigo, University of Porto, University of Warsaw, SURF, Humboldt-University and University of Barcelona for hosting and organising events in close cooperation with the EUF. Our thanks also extend to the following partners that joined forces to bring about the 'EWP Back to the Future Student Mobility Summit' which the EUF co-organised with the University of Barcelona: the Academic Cooperation Association (ACA), the European Students' Union (ESU), the Erasmus Student Network (ESN), the European Association of Institutions in Higher Education (EURASHE) and the European University Information Systems (EUNIS).

Chapter 1
Simplification

The first chapter of the White Paper focuses on the simplification of existing processes and flows, considering upgrades and improvements that are either logical, necessary or both.

1.1. Inter-Institutional Agreements

Inter-Institutional Agreements (IIAs) have been digitised, rather than digitalised, which means that the underpinning logic and business processes have not been adjusted to the requirements and possibilities a digital environment enables. In the current configuration, we are instead relying on a legacy logic which further amplifies the inefficiencies intrinsic to the process. Two core recommendations have been outlined below to fully exploit the opportunities offered by the digitalisation process.

1.1.1. IIA cooperation conditions

The cooperation conditions[2] are the "beating heart" of the IIA, where the terms of cooperation between two entities are set out. Institutions are asked to renew all of their agreements when a new programming period starts (i.e., every seven years). Many universities have more than 1000 IIAs and renewing them (or most) of them takes

2. The cooperation conditions is the main part of the IIA that contains the negotiated terms and conditions of each bilateral agreement, forming a valid basis for Erasmus+ mobilities between the institutions. For example, how many mobile students and staff to exchange each academic year. See more information in the user guides here: https://erasmus-plus.ec.europa.eu/sites/default/files/2023-10/User-Guide-Erasmus-Digital-iia_en.pdf

months of work, unless we profoundly rethink how we handle IIAs.

One of the reasons why until 2021 IIAs were renewed every seven years was because the template underpinning the document would change at the start of each programming period. But EWP marks the transition to a post-template world, free from the constraints of PDF files – each IIA is now some bits of data, and there is no strong reason that justifies deleting a perfectly good agreement… only to re-create it again. Comes 2028 the systems should allow to extend all IIAs that institutions wish to carry onto the new programme with a simple click of a button in the following manner:
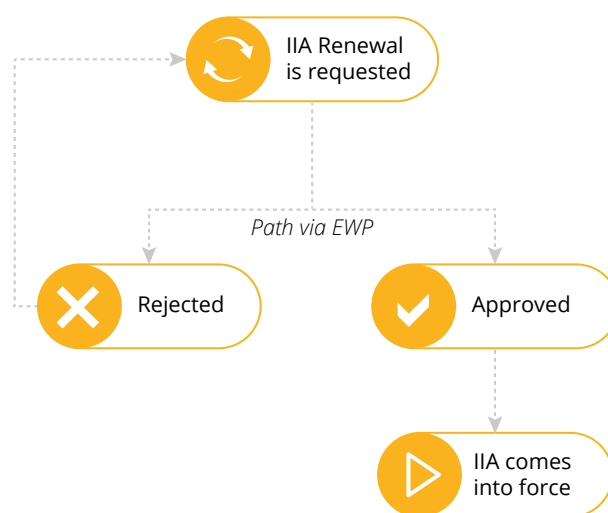

Figure 2 - Proposal for the renewal of the Inter-institutional Agreements

Many colleagues reading this White Paper will recognise the proposed flow as something that has already been implemented in the Online Learning Agreement – which is to say, something that has been extensively tested. The technical analysis of this change

has already been conducted by the EWP Consortium in the summer of 2023, the main conclusion being that this new approach towards renewing IIAs is perfectly feasible.

At the time of writing of this White Paper, all higher education institutions in Europe have already renewed their IIAs for this programme period, either though EWP or otherwise[3]. By simplifying the renewal process of IIAs in 2028, it is foreseeable that most, if not all, IIAs will have been digitised by then, notably by importing also the IIA data that has been concluded outside of EWP. While the proposed one-click renewal upgrade would need to be enabled in the respective mobility management system, it would work for all IIAs stored in these systems, regardless of whether the agreements have been initially reviewed via EWP or not, making it both **ambitious and realistic**.

1.1.2. IIA factsheet

The factsheet is usually updated on a yearly basis, which means that switching to the digital exchange of factsheet data would yield considerable time savings to all IROs.

Little needs to be done to make this a reality: while the factsheet data model is expected to be reviewed and optimised further in the course of 2024, the main challenge is to raise awareness towards the availability of this functionality and support its mass adoption.

1.2. Nominations

Once students have applied for Erasmus+ mobility at their home institution, the latter nominate the approved students to their partner institutions. This nomination process (as described in section 2.2.2) is based on specific requirements defined by the partner institution and therefore represents a very difficult process to manage for the sending institutions due to the cacophony of different systems and ways how the nomination needs to be communicated to the partner.

The implementation of the nomination process in the context of the EWP Network would further enforce the 'once-only-principle' whereby the data entered by the student during the application process is re-

Current situation

STEP 1	STEP 2	STEP 3	STEP 4
Each institution updates its own factsheet (usually by compiling an updated PDF).	Each institution emails the updated factsheet to all its partner universities (checking for wrongly entered emails, among other things).	Emails received from partners containing changes to the factsheets must be filed for updating purposes.	Each change made by the partners to their factsheet must be manually mapped and entered into the respective IT tool or website information page.

Proposed solution

Each institution updates its own factsheet, making it available to partners via EWP.
The updates are received in real time, and they are automatically processed by the respective IT tool*, ensuring that all the latest information is available to staff and students without manual intervention, double entry or clerical mistakes.

* Some tools other than the EWP reference implementation might require user intervention for registering updated factsheet data; this not an EWP requirement though.

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3. If the IIAs for some reason had been renewed on paper, these Higher education institutions still have several years to address the issue.

Student Mobility Summit "EWP Back to the Future", 2024.

used and sent from the node operated by the home institution to the node operated by the host institution. There is no template for this process, yet finally streamlining this step would lead to clear efficiency gains for all the higher education institutions.

1.3. Learning Agreements

Learning Agreements (LAs) are the most mature digital process available to the IROs and students in the EWP universe – they work well, are already used by a large number of higher education institutions and – as identified in the European Commission priorities for the 2024 – should become nearly ubiquitous in the short-term. Unlike IIAs, their transition to a digital paradigm was planned well in advance, notably through the pioneering work of the Online Learning Agreement projects[4]. Accordingly, there is relatively little left to do from a simplification standpoint.

The most useful focal point for improvement is the removal of contact details from the required fields, as these are leftovers from when Learning Agreements were circulated by email. In an EWP world, it is the IT system of each university that handles the electronic correspondence and that, most importantly, is best placed to allocate it to the adequate interlocutor. By eliminating the necessity to track the relevant contacts from partner higher education institutions, IROs would be able to save considerable time and resources.

A second step that may be considered and piloted consists of allowing certain types of Erasmus mobilities to rely on an LA only signed by the home institution - under the condition this will not negatively affect the recognition of the credits earned by students. While this would decrease the workload of IROs even more, it would require timely access to course information and very robust institutional arrangements to be in place among partner institutions, as could be the case for European University Alliances. Any changes in this regard must, however, be carefully monitored from a quality and impact standpoint.

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4. The first OLA project (2015-2017): https://uni-foundation. eu/project/online-learning-agreement/, second (2017-2019): https://uni-foundation.eu/project/ola/, third (2019-2021): https://uni-foundation.eu/project/ola-3-0/

1.4. Certificates of arrival and departure

The exchange of arrival and departure certificates is critical to the correct implementation of the workflows underpinning good conditions for the mobility experience. These certificates indicate the dates of arrival and departure that inform the grant calculation.

It is critical to assess how these certificates are currently handled, as the dates of mobility are exchanged several times: at the nomination stage, in the LA, in the grant agreement as well as in the arrival and departure certificates. The repeated input of this data renders work redundant and prone to error.

The exchange of digital certificates of arrival and departure would eliminate the need to manually key in information. The transport layer (in the case of certificates, this is usually students, rather than email) would also be eliminated; the transmission of the certificate directly from node to node is simple and tamper-proof, avoiding calculation and reporting mistakes.

The electronic exchange of certificates is already supported by EWP but not yet by the IT tools connected to it – something that ought to change in the near future, given the evident benefits of switching to electronic certificates. Of course, further simplification could be envisaged at this level by using monthly-based unit costs for grant calculations, as recommended by the EUF, ESN and ESU already four years ago[5].

1.5. Transcripts of Records

The Transcript of Records (ToR) certifies the credits/grades obtained abroad to inform the number of credits and the academic performance counted towards the degree of the students. The digitalisation of ToR would yield five main transformational benefits. In

particular, it would:

1. streamline the sending process, as staff members would no longer need to identify the designated recipients of the ToR.

2. simplify sending institutions' procedures to collect ToR, which would be imported directly in the mobility management system.

3. reduce the risks of tampered ToR as they would be transmitted from node to node.

4. decrease delays in the timely transmission of the ToR, which sometimes prevent students from starting the following semester on time at the sending institution.

5. pave the way for automatic recognition practices across all of the European Education Area by implementing automated and data-driven recognition processes.

1.6. Beneficiary Module

The Erasmus+ Beneficiary Module is operated directly by the European Commission and serves to centralise data reported by institutions and students. Its introduction in 2014 (through its predecessor called Mobility Tool+) was first met with high expectations for simplification of reporting procedures and increased monitoring options within the programme. However, the lack of technological maturity and stability in reporting requirements have since then generated additional workload and increased stress for higher education institution staff when meeting the reporting deadlines[6].

The Beneficiary Module has been developed

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5. See more information on the Erasmus 500 campaign here: https://erasmus500.eu/

6. In 2021/2022 85% of the Higher education institutions rated the Beneficiary Module as bad or very bad. The situation has not improved in 2022/2023, as it would have been expected. In both academic years the "very bad" feedback outweighs "bad" at a ratio of 3 to 1. For reference, the (also very negative) launch of the Mobility Tool in 2014/15 and 2015/16 "only" generated around 70% negative feedback.

by the European Commission and operated independently from EWP. Nevertheless, the potential efficiency gains from connecting the Beneficiary Module to EWP are tremendous: at the click of a button staff members could submit reporting data via EWP using their information systems, complying with the overall European Commission goal of having to process data according to the once-only-principle. This possibility has been discussed with the European Commission since 2017/2018 and the technical work to make this possible on the EWP Network side was already completed in 2020/2021 under the aegis of the EDSSI project. However, making such a solution work on the long run will require the European Commission to stabilise the mandatory reporting requirements, and to ensure technical interoperability by implementing the relevant specifications.

While this step would be transformative for higher education institutions, it is

the European Commission which stands to win the most from this change as the reporting process would be happening on an ongoing basis and be based directly on the data managed by the higher education institutions. Enabling reporting via EWP would allow to start phasing out the user interface of the Beneficiary Module, saving millions of euros which could be used to further the digital transformation of the programme by providing more direct and effective support to Higher education institutions themselves.

1.7. Mobility beyond Erasmus+ programme countries

Being able to handle international student mobility data and processes through the same

Student Mobility Summit "EWP Back to the Future", 2024.

tools used for intra-European student mobility is a long-held dream of many institutions, and there are several simple steps that can be taken to come closer to making this possible.

The first is to use the same IIA and LA templates/data models in both settings. This would be an important simplification with regards to: avoiding duplicate technical effort to support complementary mobility scenarios; better supporting KA131 exchanges with partner countries such as the UK and Switzerland, which rank among the most popular exchange destinations; streamlining mobility in European University Alliances where institutions from Western Balkans, Switzerland, the UK, and Ukraine participate.

This is a very low hanging fruit, insofar the existing templates are already very similar; fields such as GDPR compliance or adhesion to ECHE principles can become simple checkboxes in a post-template world. Benefits would also be economic in nature, making it much simpler for software vendors to expand their client base.

With regards to other steps to broaden the electronic exchange of data, EWP has already carried out a first successful pilot with 35 universities in 8 ASEAN countries. Contacts are currently underway to extend interoperability to US and Japan, with other jurisdictions to eventually follow. Interest in EWP has been even higher in parts of the world which currently lack the tooling to embark on electronic data exchange; developing countries will evidently present specific challenges, as well as opportunities to make a meaningful contribution for their own digital capability.

Chapter 2
Efficiency gains

Having considered what changes can be carried out to simplify the management of European student mobility, this chapter aims to quantify the impact of those actions. Since operational circumstances can vary considerably across higher education institutions, time savings per different steps of Erasmus+ mobility management (e.g. Inter-Institutional Agreement finalisation) were shared in ranges and then converted into discreet numbers. For the publication of the White Paper and to avoid misrepresentation, averages were deliberately calculated in a conservative way.

2.1. Measuring efficiency gains

The first exercise in assessing whether digitalisation was a worthwhile endeavour from a workload and economic standpoint was carried out around 2019, in the context of the Online Learning Agreement project. The team working on it took a sample of around 7000 digital LAs and asked those involved how the time required to successfully complete an agreement compared with the (then prevailing) analogue method. The answer was striking: going digital allowed time savings of 40 to 60% on average.
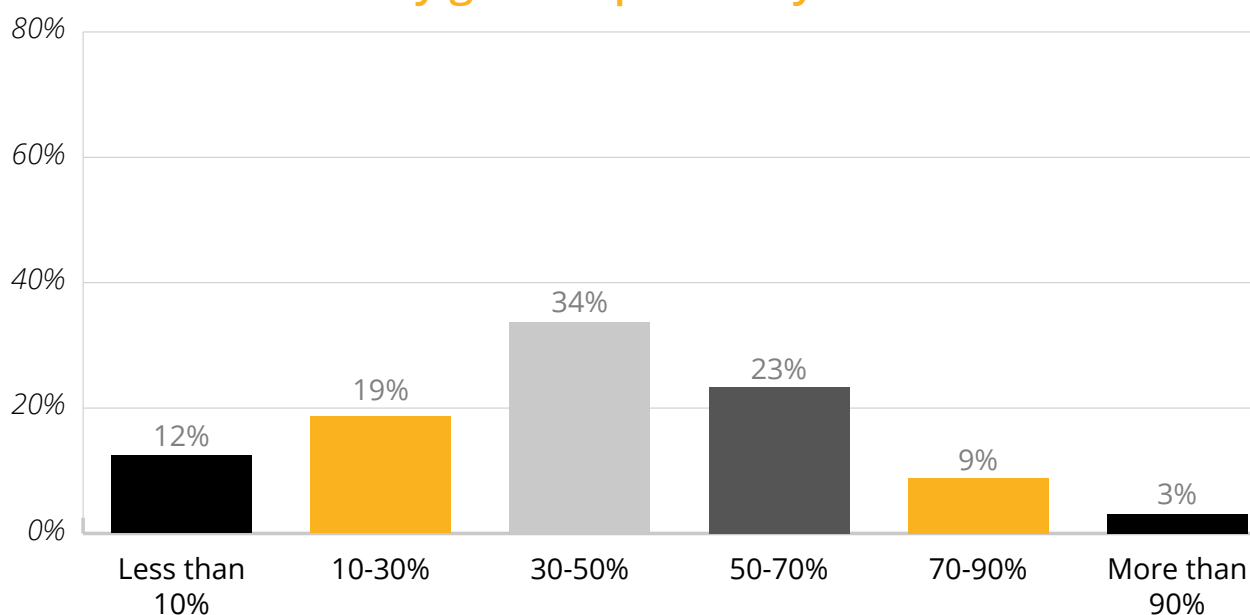
Efficiency gains reported by OLA users

Figure 3 - Results in the Online Learning Agreement Survey Report *(See more information here: https://doi.org/10.5281/ zenodo.10731972)*

Another team of universities working on the SUDTE[7] project also took interest in the matter, leading to the publication of a landmark paper[8] in September 2022 by academics from the University of Vigo and Selçuk University. Their findings are very relevant for our current analysis. We quote:

"

In terms of staff productivity the figures in Table 5 reveal an expectation of average reductions above 55% of the time spent on paperwork, which would result in a reduced workload for the IRO staff members, and contribute significantly to improving management diligence from the point of view of the beneficiaries of the mobilities: fewer errors, shorter or no delays, etc. The IRO staff would be able to use the saved time on aspects that have traditionally stood out in the satisfaction polls as needing improvements or more extensive coverage [22], such as the cultural preparations and logistic support given to beneficiaries before their mobilities, the follow-up and support offered during their stays abroad, and the dissemination of the attained results after returning.

From a different perspective, the time savings reveal an opportunity to manage an average of 80% more mobilities with the same resources and staff currently available. Effectively, this removes one bottleneck that has prevented Higher education Institutions from offering the Erasmus+ experiences to a greater number of people, thus paving the road for more effective usage of the programme's budget. "

It is noteworthy that the SUDTE team arrived at efficiency gains relatively similar to those measured five years prior, using a very different calculation methodology. Over the last few months, we worked with IROs from across Europe to gain a more granular understanding of what we can **realistically** aim at by continuing to advance the implementation of EWP.

2.2. The impact of a successful digitalisation - per process

2.2.1. Inter-institutional agreements

Ensuring that IROs will finally be afforded a positive experience in renewing their IIAs should be one of the top priorities of the new Erasmus+ programme in 2028. Large universities often have 1000 or more of such agreements: renewing them has been a resource-intensive process that can require several staff members working exclusively on this task for several months (or longer, in the case of 2021/2022). Switching to a "one-click renewal" functionality would have a dramatic impact on reducing efforts and costs. Below are some recommendations on how this could this be done in practice:

- Define a "renewal window" during which IIAs cooperation conditions should not be changed – this can happen either before or after the agreement has been extended at the start of the programme period.

- Ensure that the required technical changes to support the "one-click renewal" process are planned, executed, and tested well before the option is made available to the users (unlike 2021, and as rightly demanded by the European Parliament[9]);

- Support universities in taking a strategic approach to planning which agreements they wish to renew. The EQUATIC[10] project made this possible in the run-up to the current programme, and a similar service can be integrated in EWP moving forward.

If we consider that each of the 2800 Higher

7. See more information on SUDTE project here: https://uni-foundation.eu/project/sudte/

8. https://www.mdpi.com/2076-3417/12/19/9804

9. See more information in the following report: https://www.europarl.europa.eu/doceo/document/A-9-2023-0413_EN.html

10. See more information here: https://uni-foundation.eu/project/equatic/

education institutions participating in study mobility has an average of around 250 IIAs with their partner Higher education institutions[11], and that renewing each agreement could easily take 1,5 hours of work (an extremely conservative estimation in light of current practices), this means that **more than 1 million hours of skilled work** could be saved at the start of the next Erasmus+ programme - or more than 30 million euros saved in direct administrative costs.

Although the process of renewing IIAs described above is generally considered the most strenuous for IROs to manage - as it needs to be completed in a relatively short amount of time - this is only the beginning of the efficiency gains that can be attained.

While the cooperation conditions contained in each IIA tend to be relatively stable throughout the duration of the programme, each IIA also contains a "factsheet" with relevant data points for partners, and this document is usually updated once a year. Processing these changes takes on average 15 minutes: when multiplied by the number of IIAs[12], this number amounts to around **175**

IIA 1 click renewal could save
1 million hours
of skilled work

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11. Given that in the current programme many IIAs have been renewed outside EWP the total number of IIAs in existence is hard to estimate. Such difficulties are compounded by the fact that Higher education institutions using certain commercial providers were forced to include only one cooperation condition per IIA until the situation was corrected through the Interoperability Action Plan that was implemented in September 2022.

12. A more rigorous approach, when data becomes available, would be to multiply by the average number of partners rather than IIAs. This is because it is possible that if a given Higher education institution has celebrated several IIAs with the same partner institution, and in this case, it will only be necessary to process one factsheet update.

thousand hours of skilled work that could be saved every single academic year; when considered over the course of the duration of the programme this would amount to close to 35 million euros in direct administrative costs.

The reality is that as of today many higher education institutions simply do not have the time or capability to systematically process such updates from their partners. This can then have hidden costs associated with the work required for organising the nominations for mobility, among other tasks.

2.2.2. Nominations

The usage of digital nominations is one of the most anticipated steps in the digitalisation of Erasmus+, given how big a step in the evolution of the programme this is expected to be. Let us understand why:

Currently, IROs nominate their outgoing students through a cacophony of means – processes can be as diverse as having to create an account on the website/tool of a partner university to upload data to their system, filling out an Excel template provided by the partner and submitting it by email, or even having to download a specific application template. When the multiplicity of ways to share information is combined with the amount of information required by different partners (it is not difficult to find higher education institutions requesting as many as 20 data points per mobile student) it is easy to see how nominating a single outgoing student to a partner is a task that takes more than 25 minutes on average. The use of digital nominations via EWP will profoundly transform existing practices by having a single channel for exchanging data and a common standard for all nominations, **reducing the effort needed to nominate a single student by around 85%.**

But this is not all, as every nomination of an outgoing student needs to be processed by the hosting institution. This step takes almost

Digital nominations could save...

200.000 hours of skilled work/year

...or, over a programme period

39 million EUR in administrative costs

17 minutes on average[13] and will be impacted to a similar extent by its digitalisation – **a decrease of effort of 75% was considered,** though this could be conservative. Since confirming a nomination usually only requires confirmation against existing Inter-institutional agreements (a more granular analysis usually awaits for the application to the host Higher education institution, which happens in a subsequent step) it might be possible to almost completely automate the processing of incoming nominations completely in the future.

When taken together and considering a population of around 350.000 students per year, mainstreaming digital nominations is expected to **save almost 200 thousand hours of skilled labour per year**. Over the duration of a whole Erasmus+ programme this translates to more than **39 million euros in administrative costs** which can be avoided.

2.2.3. Transcripts of Records

Above we outlined above the key benefits of transitioning to the use of digital ToR via EWP, and showed how the effort involved in transmitting and processing incoming ToR could be entirely eradicated – a 100% efficiency gain.

When we consider that IROs take on average 18,5 minutes to process an inbound ToR, this translates in almost **110 thousand hours of skilled labour per year**, which over the duration of a whole Erasmus+ programme could amount to a **saving of more than 21 million euros in administrative costs.**
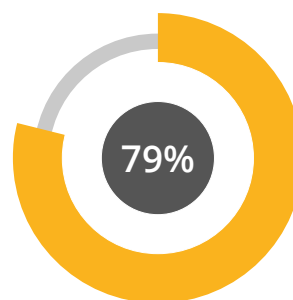
2.2.4. Other processes

It is not yet possible for the authors to make an impact assessment of all of the proposals included in the previous chapter, and this is particularly true of the Beneficiary Module. It is simply impossible to calculate quite how much time is currently spent on reporting tasks because the Beneficiary Module has never functioned to an adequate extent since its introduction in 2021.

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13. A lower workload than for outgoing nominations is consistent with empiric analyses; the average duration of both processes differs considerably across Higher education institutions, putting a premium on working with a sufficiently large and diverse sample to achieve significant results.

Completing the digitalisation puzzle

While this White Paper focuses on the betterment of key mobility processes, it stands to reason that opportunities for improvement go well beyond the processes discussed thus far. As we increasingly see substancial progress in the digitalisation of core mobility processes, it may be beneficial to initiate discussions about other crucial aspects that are essential to complete the digitalisation and internationalisation puzzle.

3.1. Grade conversion

Grade conversion is of key importance to ensure that mobile students have their academic achievements recognised in a fair and accurate way, as stipulated by the ECTS guidelines. The matter has been extensively documented and guidelines have been in place since 2016, but they are systematically ignored by many institutions which continue to resort to grading tables.

For many years, a technical solution has been implemented to effectively support the correct conversion of grades earned abroad – the EGRACONS tool[14], originally developed through an EU funded project led by the Ghent University. The tool is publicly available and is used by around 100 universities.

It is important to note that **79% of the IROs surveyed for this paper indicated having experienced grade conversion issues in the past.** It is perhaps unsurprising that 81% felt that there would be merit in integrating a grade conversion functionality in EWP.

79%

IROs encountered **grading conversion issues** in the past.

This could be achieved in two steps. The first one is to fully integrate EGRACONS in the EWP ecosystem, allowing ToR to be sent to their recipients with grades being automatically converted. This is a small policy decision that would have considerable benefits for the entire community, helping to raise awareness about the importance of correct grade conversion along the way.

A second (perhaps subsequent) step would be to include grade conversion practices among the monitoring actions that fall under the purview of National Agencies.

Both actions have a very modest cost relative to their potential benefit and would contribute greatly to ensuring higher quality standards across the programme.

3.2. Course data

There is growing recognition that enabling easier access to course data is a potential game changer for digitalisation, curricular cooperation, and the improvement of the quality of mobility. For example, it can contribute to producing good quality LAs

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14. See more information here: https://egracons.eu/

and informing a fair and robust recognition process of the credits earned abroad by mobile students.

Our work in this domain goes back to the OLA 2.0 (2017-2019) project, where a business analysis was carried out on how course data should be structured in order to be leveraged fully; this work was continued in the NORM[15] project, leading to the creation of the OCCAPI standard and of the open API[16], and was continued in the OLA 3.0 project, which made it possible for students from selected institutions to autofill course data into their OLAs.

OCCAPI has been stress-tested by integrating with some of the biggest course catalogues in Europe and benchmarked against the OpenEducationAPI maintained by SURF. This means a point has been reached where the expertise and maturity of the technical solutions available allow us to look into needs of smaller higher education institutions and bring the benefits of digital course data also to them[17].

3.3. Staff mobility

Digitalising staff mobility through EWP is easily attainable and could conceivably happen in a relatively short period of time. This is because:

- Both sending and receiving institutions are already part of the EWP Network;

- Processes are relatively straightforward and can recycle elements of the data exchange which are already used for student-facing processes;

- Existing authentication solutions can be leveraged to create robust and secure access processes that rely on the credentials used in each university (federated authentication).

While staff mobility may not constitute a huge volume of work, there are ample opportunities to better promote this type of mobility and build on the work already carried out to further ease the management of these activities. There are obvious synergies with the results of the Teach With Erasmus project that was led by ELTE[18], and which created a platform for academic staff mobility opportunities to be more widely advertised[19].

3.4. European Student Card

The European Student Card is, as the name suggests, an important part of the European Student Card Initiative (ESCI), and the EUF remains a staunch supporter of the ideas underpinning it. When looking at the students' ability to access student services abroad, the potential that the deployment of a truly European Student Card yields is great. We believe that the focus of the European Student Card ought to be placed on 'access' to student services rather than on its branding and issuing process. It is indeed noteworthy that the deployment of the student card has not picked up large interest from the higher education community or students insofar the access to student services and information about those remains very limited. The key recommendations of this paper are therefore:

- Supporting the community in adopting information-sharing infrastructure on the student services available to the European Student Card holders. The Student Service Provider module, a deliverable produced under the coordination of the Aristotle University of Thessaloniki s part of the EDSSI L1

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15. See more information here: https://uni-foundation.eu/project/norm/

16. https://occapi.uni-foundation.eu/

17. This is in fact the starting point of the DACEM project (https://uni-foundation.eu/project/dacem/), led by the University of Vigo, which will look to address these needs through the development of a cloud tool for universities which might need support in managing their course catalogues and make them available to partners electronically.

18. www.teachwitherasmus.eu/

19. https://teachingmobility.eu/

project, could serve as a basis for that.

- Providing information to students about the services accessible for European Student Card holders.

- Supporting universities in adopting digital student card infrastructure as this will do away with the need for interoperable physical student cards

which is very complex if not impossible to achieve. Pilots on the implementation of digital student cards have been conducted by Humboldt-University during the EDSSI L2 project, and by the EUGLOH European University Alliance among others.

- Enabling a distributed deployment of

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the European Student Card: offering a technical framework and standards to institutions looking to deploy their own digital ecosystem for issuing and verifying student cards alongside a European solution for Higher Education Institutions that do not want to implement such an approach themselves. Building on the strengths of decentralised design and avoiding the centralised "honeypot" could assure the buy-in. In such a setting, the adoption of the European Student Card would be much faster. The role of the European registry of Higher Education Institutions entitled to issue European Student Cards could be covered by the already existing HEI API.

Chapter 4
Smarter regulation

While excellent business expertise and sound technical solutions are essential building blocks of change of paradigm brought about by EWP, it would be naïve to think that they alone can guarantee a successful digital transition. A programme with the magnitude of Erasmus+ must rely on a predictable and fit-for-purpose regulatory environment that ensures its various components work in perfect concert. In this chapter we explore four aspects that play a decisive role in this respect.

4.1. Getting deadlines right

Digitalisation deadlines are a relatively infamous topic, having been set (in 2019) and then removed (in 2022). Along the way a valuable lesson has been learnt – it is untenable to put that kind of pressure on higher education institutions when the commercial providers they rely on are not ready themselves.

Now that the regulatory pendulum has swung between both possible extremes (strict enforcement of deadlines vs their complete removal) there is merit in revisiting the topic, and assessing whether there is a virtuous middle that should be considered when it comes to the deadlines.

The short answer to this question is a resounding yes. While organic take-up of new operational paradigms has many merits, it is unlikely that it alone will bring about a perfectly harmonious alignment among thousands of institutions. It is important to

understand that, in a networked environment, a small disturbance can create significant inefficiencies. In practical terms, a single institution refusing to transition to digital LA this has a direct impact on hundreds of students and partners. In such a scenario, students are denied the kind of mobility experience they are entitled to expect, while partners have to support fragmented flows which amount to a significant risk (quality process wise) and cost.

Next to that, given the many competing and urgent priorities that institutions have to juggle, the absence of a clear time frame for transitioning to digital processes makes it extremely difficult to plan and allocate resources accordingly.

Deadlines and clear rules should thus be the logical conclusion of a transition process where the following conditions are met:

a) Technical solutions are proven to be fit for purpose.

b) Adequate support is provided for institutions to carry out the required work.

c) A critical mass of adoption is reached.

d) All of the points above are validated by a participative multi-stakeholder governance apparatus.

From this point onwards clear rules in terms of expected usage are not just warranted, but essential to ensure a smooth functioning of the programme as a whole.

4.2. Quality assurance

Quality assurance is a topic of central importance for digitalisation in general, and particularly in the context of EWP. It is therefore critical that quality assurance processes are guaranteed and transparent.

It is well known that the lack of funding for EWP after the conclusion of its project in 2019 prevented it from getting ready for mass usage from 2021 in a way that would have been expectable and desirable. This rendered it impossible to start transitioning to a rules-based network until 2022, when dedicated EU funding eventually resumed. In the intervening years poor quality implementations by commercial providers wreaked havoc among users and led to significant IIA interoperability issues, which have been documented[20] and discussed with the affected community.

In the Spring of 2022, the European Commission and the EWP consortium agreed on a way forward with regards to strengthening the existing quality assurance framework, whereby the current technical testing practices were expected to have been superseded by industry-grade automated self-testing processes. However, two years onwards, this transition has not yet been completed and is pending further approval by the European Commission[21].

The current situation amounts to a disservice to the whole community relying on EWP, and it has already impacted the transition to the latest version of the IIA APIs that was completed in the beginning of April of 2024, leading to increased costs and risks. Efforts will of course continue to address this pending matter, which was an integral part of the Interoperability Reinforcement plan that was publicly announced in July of 2022[22].

4.3. Avoiding vendor lock-in

Both the preceding chapter on quality assurance and this one on vendor lock-in are born out of the reality of having a growing number of commercial providers offering EWP compatible services to the higher education community. When work in EWP started back in 2015 there were only around five providers offering this kind of IT solution to higher education institutions, but as of 2024 there are more than twenty. The creation of such a marketplace is a great success[23], since it means that institutions have more options than ever before. But there is one important piece of the puzzle missing, still.

A well-functioning marketplace also needs a small amount of regulation to ensure it functions optimally, and in the case of EWP more work needs to be done to ensure vendor lock-in is all but eradicated. Why is this important?

- If institutions are unable to change providers, that radically reduces incentives for providers to meet their needs and expectations.

- It is not inconceivable that at some point a given provider withdraws from the market or goes bankrupt – mechanisms ought to be in place for institutions to walk away and take their data with them without going through a valley of pain.

The importance of the issue is well understood by institutions themselves. In a recent survey, 91% of respondent higher education institutions expressed strong support for such type of mechanisms, with 76% of them considering the issue of very high importance.

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20. See more information in the 2022 Assessment Report here: https://erasmus-plus.ec.europa.eu/news/latest-erasmus-without-paper-assessment-shows-ewp-works-but-some-connections-have-problems

21. Furthermore, the consortium has invested significant own resources to accelerate the transition.

22. See more information about the Interoperability Action Plan here: https://erasmus-plus.ec.europa.eu/news/seamless-data-exchanges-for-erasmus-without-paper-for-2022

23. See more information on that in the EWP Desk research: https://uni-foundation.eu/uploads/2017_EWP%20desk%20research%20final%20version.pdf

Should EWP enforce data portability requirements in the future?
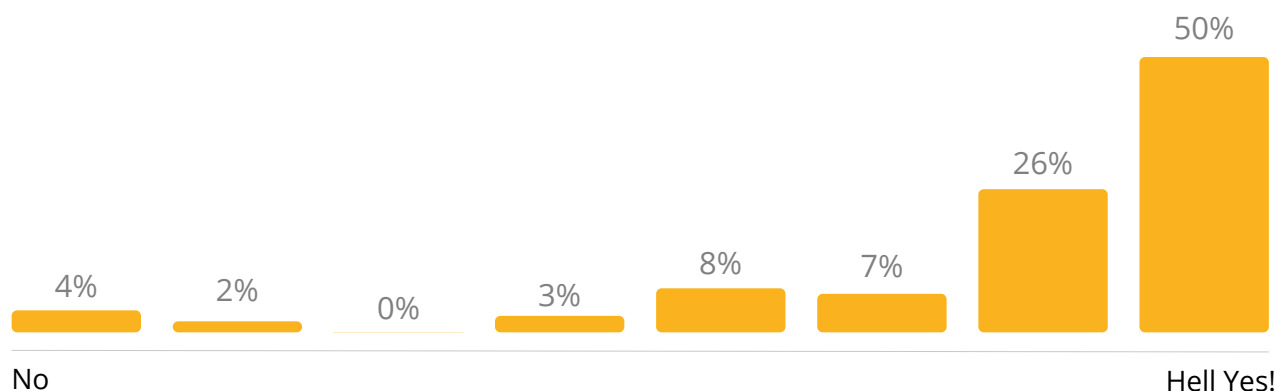
98 votes

Figure 4 - Student Mobility Summit survey results

Accordingly, and further to the preparatory technical work that was carried out in 2023, discussions with providers will be started with regards to the adoption of rules enabling data portability between different EWP connected IT solutions. Every effort will be made to enable a voluntary uptake of this measure, knowing that the Memorandum of Understanding signed between the EWP consortium and software providers does afford legal leeway for such measures to be enforced otherwise. In the next two/three years, this will hopefully contribute to the creation of a healthy, fair and well-functioning marketplace, therefore allowing universities to choose solutions that effectively cater to their IT needs.

4.8. Technical stability and predictability

This document already remarked on more than one occasion that digitalisation will bring about a "post-template" paradigm. Accordingly, it is important to understand the role of regulatory authorities in enabling the transition from electronic documents (e.g., Word, Excel, PDF) to digital standards and specifications.

Specifications such as those produced by the EWP are much more detailed than a mere document template or its guidelines. Where previously there might have been a character limit (or not) now content types are defined in much greater rigour, which is a requirement to carry out an IT implementation.

As specifications are implemented across dozens of IT systems, it stands to reason that such specialised work carries a cost for all nodes involved. This cost is far from insignificant, and many institutions switched from their own in-house system to a solution provided by a third-party (with all the inconveniences and compromises that entails) to avoid high upfront costs. The fact that such transition has not slowed down the pace of EWP adoption is very positive (remarkable, even), but one significant mid-term challenge remains – ensuring that the costs of maintaining all connected systems remain reasonable, which in turn will make the digitalisation endeavour sustainable.

The main factor that will influence the cost of maintaining EWP connections will be the frequency with which specifications are changed. While tinkering with PDF templates was a relatively modest exercise, the same is far from true when it comes to updating specifications across all connected IT systems. The rule of thumb is quite simple: the longer a given implementation lasts, the more worthwhile the investment required to enable it is. Conversely, frequent changes will not only lead to in-house systems elimination

but also entail rising costs for utilising the solutions of third-party providers, whose implementation costs will inevitably be borne by the institutions using it.

In the educational sector many data exchange specifications last 7-8 years without substantive changes, and sometimes longer than a decade. Processes like LAs and IIAs will soon be stabilised, and from that point onwards changes should be dictated only by the objective needs of the community of users or to enable new opportunities available to the participants. Yet, this is not currently the case: for instance, the Beneficiary Module upload specifications change often, without consultation or warning and in seemingly irrelevant ways. Meeting data minimisation goals and ensuring the stability of data requirements is a challenge that the whole community (Higher education institutions, National Agencies, and European Commission) must address. As PDF templates eventually become akin to vestigial organ, so should old habits that are not fit for the digital age we are being propelled into.

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Conclusion

For years EWP has been the main driver of the digitalisation of the administration of student mobility in Europe. This has proven an enormous, at times wild, and often challenging adventure. However, the buy-in witnessed from all corners of the continent shows that this endeavour is underpinned by a very objective need: to rationalise the usage of limited and valuable resources.

Almost 2000 days since becoming available to the world, the core tenets of EWP have aged well: its decentralised and privacy-first design are in keeping with current IT architectural trends and have allowed the network to scale from 20 to 3000 nodes in an effortless and elegant way; institutions continue to have a choice of ways to connect to this growing digital network, so that their needs can be taken into consideration. Data, rather than documents, is becoming the new normal in the life of IROs. And we have made sure that no institution has been left behind in the digital transition by ensuring that adequate tooling was made available, notably to institutions who would otherwise not have been able to afford it.

In a context where policymakers and stakeholders are reflecting on the next programming generation starting from 2028, the forthcoming months and years will be critical in bringing about further simplification and widespread positive impact. EWP started as an initiative "by universities and for universities", and while it is very positive that it has since then rose to become a cornerstone of the European strategy for universities, it is essential that it remains focused on the actual needs and expectations of the higher education community.

Across four chapters, this White Paper explores what are the next steps required to ensure that international relations officers and students can capitalise from the benefits of digital transformation happening in the context of the European Student Card Initiative.

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Simplification

The first chapter outlines how the different steps of the Erasmus mobility management could be adjusted for the digital age. It is critical that these steps are properly digitalised - not just digitised - as it allows us to improve the workflows in such a way that allows many more participants to benefit from high-quality Erasmus experiences. The following recommendations are put forward:

1. Enable one-click renewal of Inter-Institutional Agreements (IIAs) as of the next programme period.

2. Ensure mass adoption of digital factsheet, making all the latest information available to staff and students without the need of manual intervention.

3. Mainstream the usage of a uniform, consistent and user-friendly nominations via Erasmus Without Paper (EWP), doing away with the myriad of channels and ways in which nominations are being done now.

4. Remove the contact field from the Learning Agreements (LAs); as LAs are exchanged in the digital form now, the host Higher education institution is best placed to know who should receive the LAs and reroute the electronic correspondence accordingly.

5. Initiate a pilot that allows certain types of Erasmus mobilities (e.g. within a University Alliance) to rely on a LA only signed by the home institution - under the condition this will not negatively affect the recognition of credits earned by students.

6. Switch to electronic certificates of arrival and departure for tamper-proof and easy confirmation of the mobility dates.

7. Facilitate the use of digital Transcripts of Records (ToR), as this can speed up the exchange of such documents and pave the way for the automatic recognition practices.

8. Connect the Beneficiary Module to the EWP, making it possible for Higher education institutions to submit their reporting data directly from their IT systems via the EWP.

9. Use the same IIA and LA templates/data models for mobilities beyond Erasmus+ programme countries. This avoids duplicate technical effort to support complementary mobility scenarios and facilitates closer cooperation with partners from the UK, Switzerland, Western Balkans, and Ukraine.

Efficiency gains

By measuring the efficiency gains, the White Paper illustrated the benefits of digital transformation and the impact of a successful digitalisation process. The available data suggests that institutions could realise significant resource savings, spanning up to one million hours in the case of IIA renewal and 200 thousand hours per year when digitalising nominations.

Completing the digitalisation puzzle

The White Paper also explores what opportunities lie beyond the key mobility processes, providing insights on how to enahance grade conversion, usage of course data, staff mobility and the European Student Card. The following recommendations are put forward:

1. Integrating EGRACONS in the EWP ecosystem would enhance grade conversion practices, as well as enable automatic conversion of the grades in Transcript of Records.

2. Streamline the access to course data that would facilitate the curricular cooperation and improve the quality of mobility.

3. Leverage on the work already done in the EWP Network as well as on existing authentication solutions to also enable digital management of staff mobility.

4. Support universities in adopting the digital student cards, therefore eliminating the need for physical student cards. To enable a distributed deployment of the European Student Card, it is critical to:

   a. provide technical framework and standards to institutions looking to deploy their own digital ecosystem for issuing and verifying student cards,

   b. provide a European solution for Higher Education Institutions that do not want to develop their own digital ecosystem.

5. Support the community in adopting information-sharing infrastructure on the student services available to the European Student Card holders and make this information available to the students.

Smarter regulation

A programme with the magnitude of Erasmus+ must rely on a predictable and fit for purpose regulatory environment, allowing its various components to work in perfect concert. Thus, this chapter explored four aspects that play a decisive role in this respect, namely the role and format of deadlines, quality assurance, data portability frameworks as well as the stability of the programme requirements needed to ensure technical stability and predictability. The following recommendations are put forward:

1. Set clear rules in terms of expected usage, assuring that the following conditions are met:

    b) Technical solutions are proven to be fit for purpose.

    c) Adequate support is provided for institutions to carry out the required work.

    d) A critical mass of adoption is reached.

    e) All of the points above are validated by a participative multi-stakeholder governance apparatus.

6. Finalise the move from a trust-based to rules-based EWP Network by deploying industry-grade automated self-testing processes, therefore reducing costs and risks in the further roll-out of the European Student Card Initiative.

7. Assure full adoption of the EWP data portability framework to avoid vendor lock-in and boost the overall quality of the services that Higher education institutions are receiving from their software providers.

8. Whenever possible, stabilise the data specifications, thus allowing Higher education institutions to reap the fruits of the implementation work and enjoy the efficiency gains brought about by the digital transition.