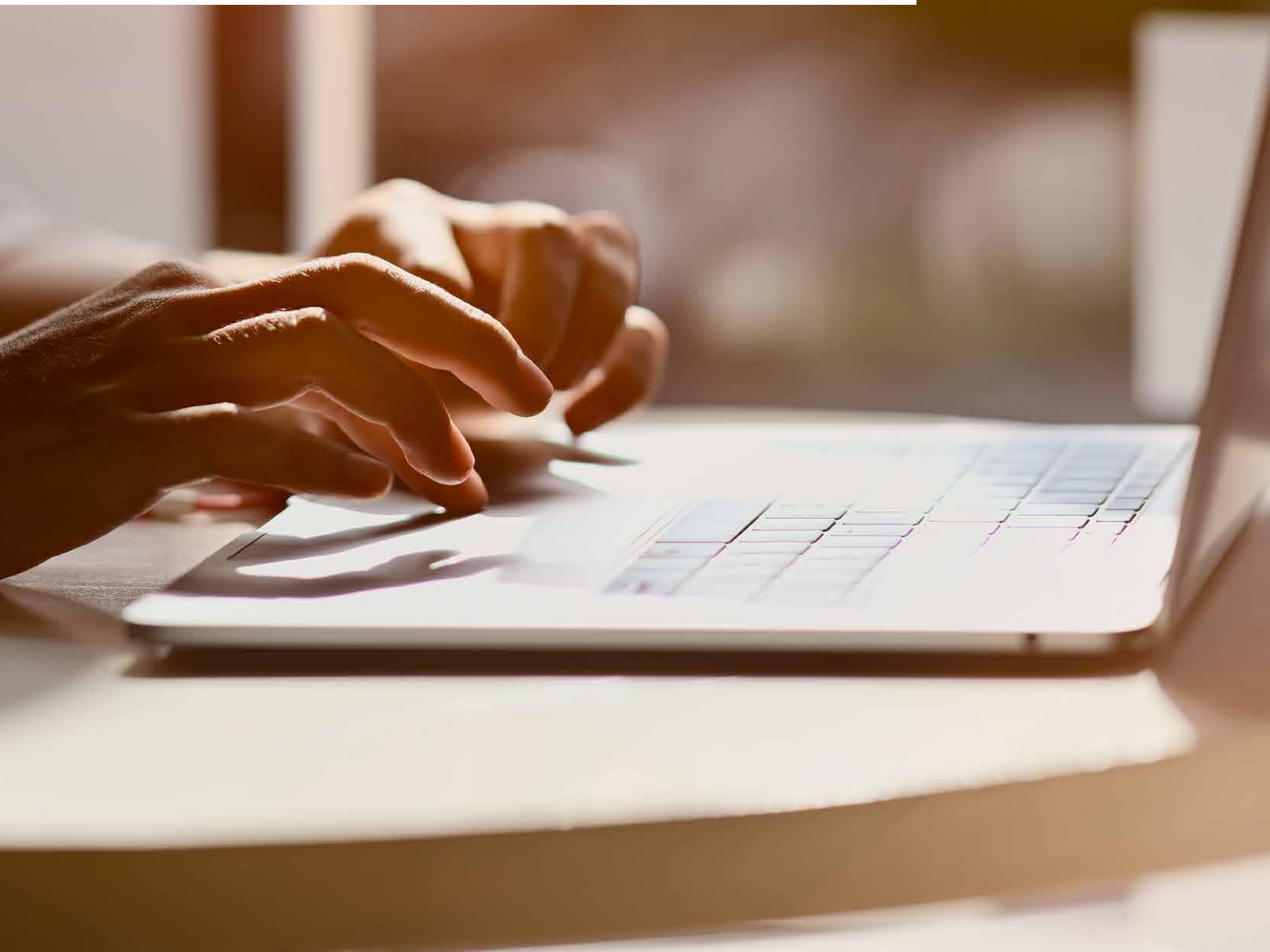




DATAFLOW

Insights on Credentials Verification



Document purpose

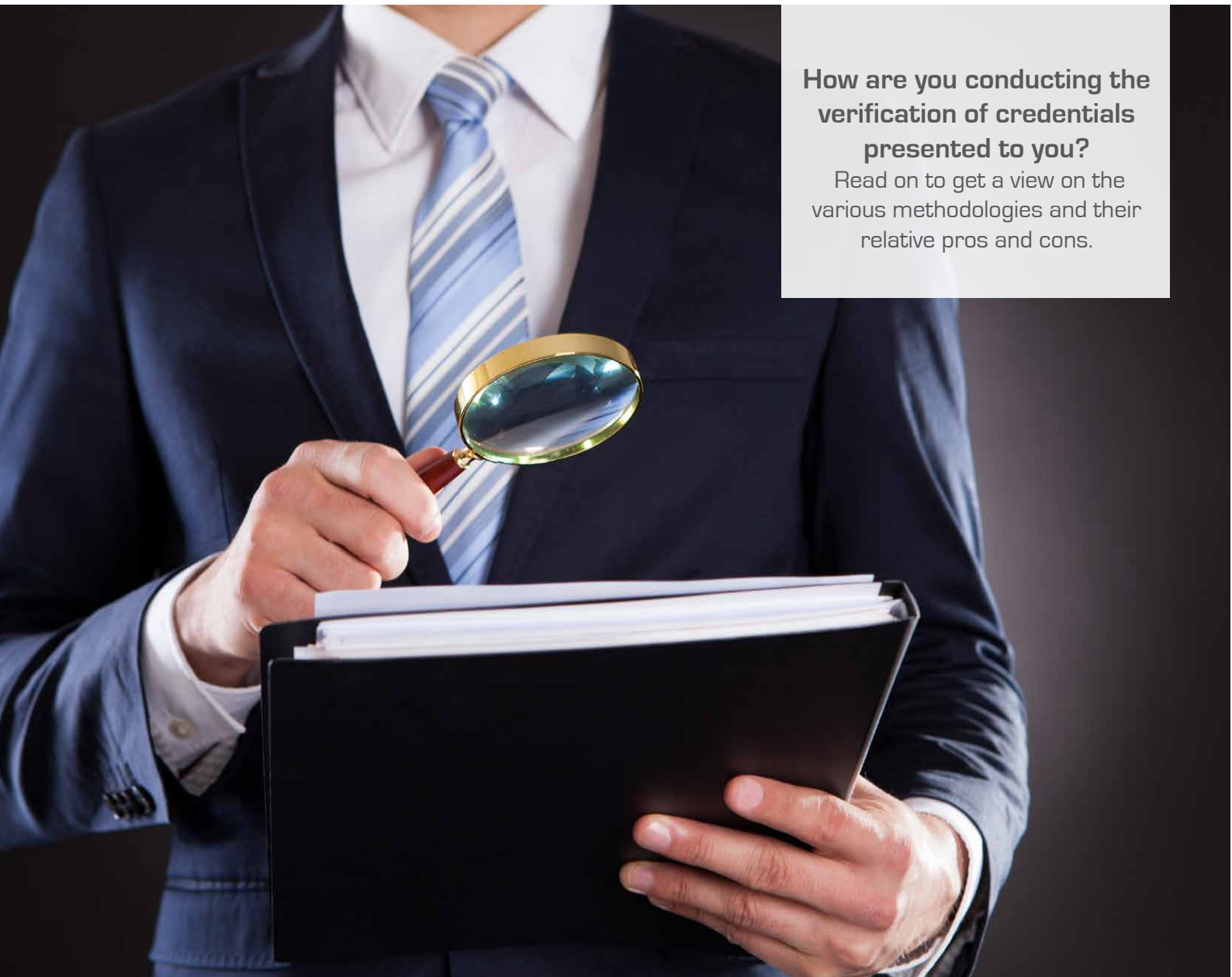
The document seeks to understand the various prevalent methods for verification of credentials and evaluates the relative benefits of the methodologies.

Target segment

The document is for any individual or organization contemplating evaluation of credentials or currently using one or more credential evaluation methodologies and assisting them in making an informed decision in this regard.

Document excerpt

As we get more globally connected, leveraging the best of available talent globally, we are presented with new opportunities and challenges. A challenge which seems to be increasing very quickly is how to establish the authenticity of the credentials presented by the prospective Candidate. There are a plethora of methodologies commonly used to validate the credentials ranging from a personal call to Primary Source Verification conducted by an industry specialist.



How are you conducting the verification of credentials presented to you?

Read on to get a view on the various methodologies and their relative pros and cons.

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Need for Verification

We have come a long way from when the certificates could be taken at face value for an individual's qualifications or experience. With progress in technology and its proliferation, it has become significantly easier and cheaper for an institution to issue a certificate and so has it for an individual, who can make one on a whim. Some of the reasons which continue to foster the need for verification include:

- Talent mobility across the globe
- Access to fraudulent credentials has become easier
- Technology has made counterfeiting and document alteration easier
- Cannot run businesses purely on the basis of trust
- Higher stakes involved expectation of greater control and governance from the regulators
- Backup in case anything does go wrong

Prevalent methods of Verification

There are myriad methods and variations that are in use by entities and institutions. While each one of them has its own benefits, there could be challenges that could be inherent in each of the processes.

It is prudent to know what the various methods are, how they work so as to be able to make an educated decision on the choice of the method.

We would be covering some of most prevalent forms of methods, namely

- Online Research
- Personal References
- Visual Comparison
- Template Comparison
- Attestation
- Apostle
- Primary Source Verification

There could exist methods which are a combination of two or more methods or even a technology based implementation of the above mentioned methods, however, the basics would still remain the same.

Online Research

One of the easiest and quickest methods available to review credentials presented is checking the credentials through an online research or calling the facility as per the number mentioned in the credentials. There can be variations on search engines we use or how we reach out to the facility for the validation.



Benefits

- **Quick** - Depending on the actual methodology this is the quickest way to check the validity of the credentials presented.
- **No external dependencies** - Checking online or using a phone call to check on the credentials has no external dependencies.



Challenges

- **No check on the validity of the institution** - A mere presence of the institution on the web, having a website or being able to answer a phone call does not imply validity of the institution.
- **No information if the institution or the credential is accredited** - More relevant in the cases of educational or professional credentials, there is no check on the accreditation of the institution or the credentials presented.

Personal References

Accepting statements from personal referees is a widespread practice that is used to obtain the verification of certification or experience. This is a reference obtained from someone who has known the subject or applicant in a professional or educational context but not limited to (can also extend to a patient's doctor, accountant or similar in nature).



Benefits

- **Quick** - The method of verifying the presented documents requires little investment of time or effort on part of the verification researcher. The applicant could also assist in the process or expedite the process itself.
- **No or Low cost** - This is a low cost solution and requires minimal time investment from a verification researcher and is often conducted using an automated email prompted during online data submission.



Challenges

- **Applicant's bias** - An applicant/the subject can prewarn their named referee that they will be contacted to make a statement relating to the credentials requiring verification.
- **Bias** - Named referees will have known the candidate personally, this creates an opportunity to show preference to the applicant and a tendency to agree with the request without thorough assessment.
- **Not a qualified source** - Whilst personal referees could well be reliable people, (often lecturers or line managers are selected), they generally will not have access to the factual information needed. Often the requirements of a personal referee will only be a professional person the applicant has known for a certain number of years.
- **Fraud** - An applicant has the opportunity to find a collaborator in a suitable position willing to fraudulently confirm falsified documents or otherwise an embellished CV.
- **Automation** - Removing the human element from the verification process may save time. While this again contributes to a reduction in time effective chasing for the information and efficient assessment of the results obtained and further investigation which may be required is not yet achievable using AI.

Visual Comparison

The method of visual comparison works on comparing the presented document and its key features to a known authentic document or known forgery. In this process, the operator meticulously looks at the presented document, its content and features to establish if the document is authentic.

The above principle can be moved to the tech world with Machine Learning being leveraged to scan through a library of known genuines and known forgeries.



Benefits

Visual comparison of the presented document against a library of known genuines and known forgeries comes with several benefits including:

- **Quick** - Depending on the actual methodology used i.e. Machine Learning based technology or an expert with exposure to credentials over several years, this could be accomplished over a few seconds to less than a day.
- **No external dependencies** - Visual comparison is reliant on comparing the presented document against the library of documents available, it has no external dependencies.



Challenges

- **Lack of detection of change in details/information** - In case of any change in the smaller details in the document. While all visual components check out, small changes in details, say like the marks for one of the subjects or change in the name of the individual named in the certificate cannot be caught by this methodology.
- **No information if the institution or the credential is accredited** - More relevant in the cases of educational or professional credentials; there is no check on the accreditation of the institution or the credentials presented.

Template Comparison

The method of template comparison works on comparing the presented document and its key features to a known set of templates for authentic documents. In this process, the operator or the algorithm meticulously looks at the presented document, its content and features to establish if the document is authentic.

The above principle can be moved to the tech world with ML being leveraged to scan through a library of known templates and use of Artificial Intelligence (AI) techniques to compare the presented document to the known templates/library.

This methodology does not differ from the Visual Comparison method significantly and the principles are quite similar. However, Visual Comparison uses a base of issued documents and known forgeries, template comparison leverages a library of templates to compare for typical document features. A combination of the two is typically presented together as a combination to reduce false positives or false negatives.

The set of benefits and drawbacks of the process are the same as Visual Comparison. Please refer to the table above for benefits and challenges.

Attestation

Attestation in the generic term includes several different methods prevalent globally for establishing the authenticity of the documents. In the context of international professional migration, the study is limited to 'Certificates Attestation' being conducted within the backdrop of requirements for long term visas, work permits or immigration. The focus of document attestation around legalization of significant documents, so as to make them admissible to the authority that demands them. Depending on the origin or type of the document, the procedure for the attestation of educational certificates would vary.

The high level process for attestation starts with the university attesting the documents, which are then attested by the Ministry of Education or Ministry of Human Resources in the document source country. This is followed by attestation from the Ministry of External Affairs in the source country. These attested documents are presented to the Ministry of External Affairs and any other notified ministries in the receiving country and finally the receiving institution.

The process relies on each ministry or department progressively putting their stamp of approval on the document based on their recognition and established trust for the preceding ministry or department stamp.



Benefits

Mutual trust - Attestation as a process depends on placing mutual trust between known and recognized parties.



Challenges

- **Socializing of responsibility** - Through the routing of documents for attestation through various ministries, attestation socializes the responsibility for establishing that the underlying document and the information is true and genuine.
- **Large investment of time** - Considering the number of stakeholders within the process, there is a significant investment of time by the individual to secure all seals and stamps.

Apostling

Hague Convention Abolishing the Requirement of Legalisation for Foreign Public Documents, the Apostille Convention, or the Apostille Treaty signed on 5 Oct 1961 in Hague, specifies the modalities through which a document issued in one of the signatory countries can be certified for legal purposes in all the other signatory states. In practical terms, if the destination country is one of the 118 signatory countries, the attestation at the source country followed by an 'apostille' stamp by the recognized party at the source country, is sufficient to be recognized as an authentic document in the destination country.

The set of benefits and drawbacks of the process are the same as Attesting. Please refer to the table above for benefits and challenges.

Primary Source Verification

Primary source verification or verifying the credentials from the source is the most evolved methodology to determine the authenticity of the document and the information contained in the document.

The principles are simple and there exist variations in the way they are implemented. The base principle powering verification at source, is to reach out to the Issuing Authority (IA) which had issued the document and seek their input on the authenticity of the document and the information contained in it. For this to work, there has to be a check to be placed if the source is authorized to issue the certificates originally and the current individual from whom the verification is being sought is the authorized individual for the verification.



Variations

While keeping the principles similar there can be variations in the way the actual verification process is performed. Some of the know variations in the processes include:

- **Digital Verification** - The Issuing Authority could digitize their records and make them available in a form in which verification can be sought electronically.
- **Issuing Authority direct response** - The Issuing Authority could be asked to send the certified copies directly to decision makers thereby ensuring verification from the source.
- **Reach the Issuing Authority** - Decision makers could reach out to the authorized individual at the Issuing Authority to review the submitted documents and sign off on the authenticity of the documents.

While each of the variations has its relative merits, the implicit trust placed by the individual or organization taking a decision based on the verification report received onto the agency which processed the verification and thereupon the trust placed on the Issuing Authority for having checked the authenticity of the documents.



Benefits

- **Comprehensive** - Through the process of reaching out to the Issuing Authority for checking the authenticity of the document, this is the most comprehensive verification methodology.
- **Secure** - Through closing out the participation of the certificate owner as part of the process, the process significantly reduces the potential of the certificate owner to influence the outcome of the process.
- **Site Visits** - Site visits are not common practice when trying to verify credentials on the basis of the heightened knowledge, relationships and resources needed for them to be conducted efficiently. Instances in which an Issuing Authority has been unresponsive, a site visit may be required to verify an applicant's credentials. While resource heavy, this is sometimes the only option to confirm an applicant's credentials or the validity of an Issuing Authority itself. Site visits can sometimes be eye opening and bring out significantly important aspects which may not have been available without a site visit.



Challenges

- **Comprehensive** - As the process requires the agency to check (a) if the Issuing Authority is authorized to issue the certificates, (b) if the respondent at the Issuing Authority is the authorized individual and (c) seeking the verification, it can be a significant investment of time and effort on the part of the agency and the Issuing Authority.



Conclusion

A study of the existing credential or certificate verification methodologies, the Primary Source Verification methodology is the most comprehensive and evolved method. While there exists several segments within the methodology which could benefit from evolution and adoption of technology, as on date, it presents itself as the methodology to detect the authenticity of documents.

Across the globe key healthcare and education ministries have adopted PSV as the methodology to authenticate the credentials of professionals applying for work licences, employment pass or career opportunities. As opposed to traditional background screening procedures, PSV attains the confirmation on the authenticity of credentials from the issuing source directly, ensuring that applicants are genuine, qualified and competent, which streamlines and empowers the screening process of professionals from various industries, thereby building confidence in making sound decision by regulators, corporates and authorities. DataFlow as a pioneer in PSV has made a solid mark in this field with its cutting edge technology, access to more than 100K issuing authorities across the globe and qualified research analysts and partners with majors regulators, supporting their licensing and recruiting process. DataFlow's verification solutions manage recruitment and registration risks bridging the qualified talent gap with specialized Verification Solutions and its implementation as per international standards.



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