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Assessment and certification of basic digital skills for less qualified adults in France

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Sintesi (in Italiano)

Il progetto VAL.U.E C.H.A.IN Competitiveness (VALidating and Upskilling Employees' Competences Hence Accruing INdustry competitiveness) è un progetto europeo finanziato dal programma EaSI (Employment, Social Affairs and Inclusion) della Commissione europea.

Il progetto ha come obiettivo quello di sviluppare in Italia dei percorsi personalizzati per lo sviluppo e il riconoscimento delle competenze digitali di base dei lavoratori meno qualificati, in particolare di quelli più anziani.

Sul versante francese, il progetto ha coinvolto il Céreq al fine di ottenere degli elementi di conoscenza e di benchmarking, da un lato, sul tema dello sviluppo delle competenze nel contesto francese e il rapporto con le competenze digitali dei lavoratori meno qualificati. Tale esercizio è stato svolto sulla base dell'elaborazione di dati tratti dall'indagine Défis¹ ed ha fatto oggetto di un primo rapporto². Dall'altro lato, il Céreq ha contribuito a raccogliere degli elementi empirici circa la diffusione e gli utilizzi delle certificazioni esistenti nel sistema francese per l'identificazione, lo sviluppo e il riconoscimento delle competenze digitali di base. Sono state esaminate in particolare le certificazioni *Cléa numérique* e *PIX*.

A questo scopo una indagine esplorativa (non esaustiva) di tipo qualitativo è stata condotta tra aprile e luglio 2022. Undici interviste approfondite semi-strutturate sono state realizzate con una serie di stakeholders di varia provenienza (enti di formazione accreditati Cléa numérique, organismi certificatori, organizzazioni professionali di categoria, enti paritari responsabili della formazione dei lavoratori (OPCO), esperti della materia).

La transizione digitale, che comporta lo sviluppo di competenze nuove e innovative, è da diverso tempo oggetto di dibattito pubblico in Francia e presente nelle recenti strategie di politiche pubbliche emanate dal Governo. Dall'ultima riforma della formazione professionale (legge n. 2018-771 del 5 settembre 2018 per la "libertà di ciascuno di scegliere il proprio futuro professionale") al piano France Relance (2020) passando per il piano France 2030, il digitale è considerato un tema strategico per il Paese.

Tuttavia, la sua onnipresenza nel dibattito ha generato una forte **polisemia** e una proliferazione di interpretazioni e utilizzi, anche in ambito professionale, che vanno dai *digital fundamentals*, intesi come le competenze minime per poter evolvere in un ambiente di lavoro digitalizzato (e, più in generale, in una società digitalizzata), alle tecnologie digitali d'avanguardia e innovative, gestite da una categoria più ristretta e specializzata di persone altamente qualificate, il cui numero è destinato ad aumentare, in una logica di espansione dell'economia digitalizzata.

L'indagine qualitativa svolta, pur non essendo esaustiva, ha permesso di condurre delle prime osservazioni sul tema dello sviluppo e del riconoscimento delle competenze digitali di base dei lavoratori, in particolare di quelli meno qualificati e meno autonomi rispetto alle tecnologie digitali. Ha inoltre permesso di tracciare un quadro **degli attuali utilizzi delle certificazioni Cléa numérique e PIX in ambito aziendale**, facendo emergere diversi punti di attenzione e possibili incentivi per accelerare la loro diffusione e creare le premesse per dei contesti d'impresa favorevoli all'acquisizione e alla certificazione delle competenze digitali di base.

¹ L'obiettivo dell'indagine DEFIS, finanziata da France Compétences e realizzata dal Céreq, è quello di misurare le pratiche aziendali, i percorsi di carriera e di formazione dei lavoratori dipendenti francesi. Avviata nel 2015, l'indagine ha coinvolto prima 4.500 aziende e poi 16.000 dipendenti di queste aziende (intervistati su base longitudinale per i successivi 5 anni). L'indagine è terminata nel 2019.

² Lambert M., Vernoux-Marion I., 'Le développement des compétences des salariés peu qualifiés', Ottobre 2021

I colloqui condotti hanno confermato l'esistenza di percezioni diverse dei problemi e diverse sensibilità tra gli attori intervistati; problemi che non includono necessariamente l'apprendimento dei fondamentali della tecnologia digitale. Le interviste rivelano **un'appropriazione ancora incompleta dei temi legati alla lotta al *digital divide* e all'analfabetismo digitale in ambito professionale**, sia per quanto riguarda l'apprezzamento quantitativo dei problemi a cui le risorse umane potrebbero essere confrontate, sia per quanto riguarda l'impegno a approfondire per apportare risposte concrete al problema.

Il primo passo sarebbe quindi quello di lavorare a un vasto sforzo di sensibilizzazione sulle questioni legate alla padronanza dei fondamenti delle tecnologie digitali in ambito lavorativo, e al riconoscimento di queste competenze, indipendentemente dal settore di attività e dalla mansione, e in particolare da parte dei dipendenti meno qualificati e di quelli che appaiono più isolati dall'uso degli strumenti digitali.

Questo sforzo di sensibilizzazione, unito a un rafforzamento delle capacità delle diverse parti interessate a vari livelli, potrebbe **ispirarsi a iniziative e sperimentazioni già esistenti nel paese, la cui attuazione si basa su incentivi finanziari e un pilotaggio degli OPCO o delle organizzazioni paritarie di settore (*branches*)**.

Oltre alla sensibilizzazione e al sostegno, un'azione efficace a favore dell'acquisizione e del riconoscimento dei fondamenti digitali richiede la disponibilità di percorsi di formazione e di certificazione adeguati al contesto della formazione continua dei lavoratori.

Se la certificazione *Cléa numérique* è pensata fin dal principio della sua elaborazione per una forte contestualizzazione professionale e intrinsecamente orientata verso un pubblico (meno qualificato) di lavoratori, la certificazione PIX è più generale, più orientata all'acquisizione di una "cittadinanza digitale" più larga (adatta per esempio a un pubblico giovane di studenti). Tuttavia, entrambe le certificazioni possono aprire all'organizzazione di pedagogie e formazioni più adatte al contesto lavorativo. Occorre però prestare attenzione alla natura "interamente online" dell'approccio PIX, che può rappresentare un ostacolo per i dipendenti meno autonomi con la tecnologia digitale.

La conoscenza di *Cléa numérique* e PIX non è ancora diffusa nel contesto aziendale, e non c'è consenso sulla percezione dei rispettivi pubblici, sui valori d'uso e sui contributi, così come sulla relazione tra le due certificazioni. La decorrelazione tra la formazione in competenze digitali e la certificazione delle competenze digitali, la proliferazione dell'offerta (a tutti i livelli di competenza), rende difficile la lettura. La mancanza (rilevata dagli attori aziendali) di offerte formative adatte alle specificità e ai ritmi del pubblico dipendente, non contribuisce attualmente a un utilizzo più diffuso delle due certificazioni in ambito aziendale.

Malgrado la sua genesi intrinsecamente professionale, *Cléa numérique* potrebbe diffondersi più rapidamente nel quadro delle politiche attive per il lavoro, presso gli attivi disoccupati, stabilendo un continuum con la certificazione "gemella" *Cléa socle* (pensata per certificare le competenze di base in lettura, matematica, espressione orale ma anche i rudimenti dell'uso degli strumenti informatici). Al momento dell'indagine l'utilizzo di *Cléa numérique* da parte dei servizi pubblici dell'impiego era comunque ancora più limitato di quello di *Cléa socle*. Inoltre, molti degli enti di formazione abilitati a erogare la certificazione *Cléa numérique* testimoniano di una scarsa domanda sia da parte dei servizi per l'impiego e ancor meno da parte delle aziende.

Per quanto riguarda PIX, inizialmente pensata per l'ambito scolastico è plebiscitata da un pubblico di studenti e giovani (il test di posizionamento si esegue on line e gratuitamente) e promosso nelle scuole per misurare le competenze digitali che spesso vanno ben oltre le competenze di base (PIX è organizzato in 8 diversi livelli da novizio a esperto). Le strategie di diffusione di PIX mostrano un forte desiderio di differenziazione degli utenti e la volontà aprirsi e adattarsi al mondo professionale. La sua attuazione è graduale, in particolare attraverso la concessione di abilitazioni a enti per la formazione continua o azioni sperimentali organizzate in collaborazione con gli OPCO o gruppi di imprese. Questa volontà di apertura è inoltre evidenziata dall'accordo stipulato con *Cléa numérique* che permette ai due standards di convergere verso una doppia certificazione PIX / *Cléa numérique*.

Nei (rari) casi in cui *Cléa numérique* e PIX entrano nelle pratiche aziendali, esse non sono necessariamente utilizzate a scopi di formazione e/o certificazione ma piuttosto utilizzate come strumenti di diagnosi e di posizionamento dei dipendenti circa le loro competenze. Queste diagnosi potrebbero costituire fasi preliminari nell'elaborazione di strategie HR per lo sviluppo delle competenze e per la costruzione di piani di formazione che integrino le competenze digitali, in particolare i fondamenti della tecnologia digitale. Tuttavia, le aziende sono restie a dare priorità a questo tipo di strategie di formazione e, sulla base dei finanziamenti disponibili, tendono a privilegiare altre formazioni spesso destinate ai lavoratori più qualificati.

In conclusione, sebbene le due certificazioni *Cléa numérique* e PIX, siano ancora recenti e non siano ancora sufficientemente diffuse tra i lavoratori, esse mostrano un potenziale di appropriazione da parte degli stakeholder interessati e di adattamento alle esigenze dei lavoratori. La trasformazione di questo potenziale appare necessaria e, per di più, richiesta a livello delle politiche pubbliche nazionali. La loro diffusione deve essere accompagnata da un quadro di incentivi efficace che dedichi fondi e risorse a obiettivi specifici, in questo caso la padronanza e il riconoscimento dei fondamenti degli strumenti digitali da parte dei dipendenti. Si rende necessario un approccio sistemico che riunisce attori interni ed esterni alle aziende e combina azioni a medio e lungo termine.

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Introductory remarks

The VAL.U.E C.H.A.IN Competitiveness project (*VALidating and Upskilling Employees' Competences Hence Accruing INdustry competitiveness*) is a European project funded as part of the European Commission's EaSI (Employment, Social Affairs and Inclusion) programme.

The project was launched in 2020 and is being put into action by a consortium of Italian and French partners coordinated by INAPP (National Institute for the Analysis of Public Policies) in Italy.

It is concerned with the personalised pathways through which the least skilled, and particularly the older ones among them, develop and gain recognition for their basic digital skills.

Thus, on the Italian side, the aim is to design and then trial in several regions and volunteer companies a basic and transversal digital skills training and certification system in order to encourage those workers experiencing the greatest difficulties to adapt to the changes in the workplace brought about by the digital transition.

On the French side, the project has called on Céreq in order, firstly, to use Défis survey³ data to examine the question of skill development and the least skilled workers' relationship with digital technologies⁴ and, secondly, to shed light on the Italian experiment, particularly through a field survey focusing on feedback from the stakeholders in the programmes that exist within the French system for identifying, developing and recognising basic digital skills, and in particular the *Cléa numérique* certification programme.

Faced with the profound, multifactorial changes that are affecting its economy and its society and in which the digital transformation is playing a significant role, France is indeed, striving "to transform vocational training in order to build a high-skills society" in which digital skills are occupying an increasingly important place and that would enable "individuals to construct their own career pathways" in order to face up to these changes.

According to ANACT⁵, virtually all jobs today have a digital component. And according to France Stratégie, 75% of jobs require proficiency in the basic digital skills.

Digital skills are now part of the basic work-related skills that require employees and companies to upgrade their skills regularly in order to maintain employability and performance levels.

However, according to ANLCI⁶, 2.5 million individuals do not possess the basic skills. Of these, 51% are in employment and 53% are aged over 45.

³ *Dispositif d'Enquête sur les Formations et les Itinéraires des Salariés* (DEFIS)/the Employee Training and Trajectory Surveys, which are funded by France Compétences and carried out by Céreq, seek to link companies' practices with their employees' career trajectories and the training they have received. Launched in 2015, the surveys focused initially on 4,500 companies and then on 16,000 employees, who were questioned again each year until 2019.

⁴ Report on "The development of the skills of low-skilled employees", Marion LAMBERT, Isabelle VERNOUX-MARION, October 2021.

⁵ *Agence Nationale pour l'Amélioration des Conditions de Travail*/National Agency for the Improvement of Working and Employment Conditions.

⁶ *Agence Nationale de Lutte Contre l'Illettrisme*/National Agency for Combating Illiteracy.

Moreover, 13 million individuals have difficulties with digital technologies. 19% of French people have abandoned a procedure because it had to be completed on line. And 48% of those without qualifications have never connected to the Internet.

Thus the fight against illiteracy and digital illiteracy appears to be an essential one. The two terms are often used together but, while people suffering from illiteracy are also very often digitally illiterate as well, those suffering from digital illiteracy are not necessarily illiterate.

Thus the latest reform of vocational training in France (Act no. 2018-771 of 5 September 2018 on the Freedom to Choose One's Professional Future) takes the digital dimension into account on several levels, including basic digital skills.

Article L.6321.1 of the Labour Code on employers' obligations to provide training, for example, has been amended as follows:

“Employers shall ensure that employees are suitably trained for the jobs they hold. They shall ensure that they maintain their ability to hold a job, notably with regard to changes taking place in jobs, technologies and organisations.

They may offer training courses that contribute to the development of skills, particularly digital skills, as well as to the fight against illiteracy, in particular assessment and training measures facilitating access to the knowledge and skill base defined by decree.”

As for decree 2018-779 of 10 September 2018 on the common base of vocational knowledge and skills, it amends in particular article D.6113-2 of the Labour Code as follows *“The use of the standard digital information and communications technologies [...] has been extended to include a supplementary module, the purpose of which is the acquisition of knowledge and skills relating to the basic uses of digital technologies within the work environment”*.

In 2018, additionally, a national digital strategy was launched and manifested in the “Digital Society” programme administered by the ANCT⁷. It aims to combat what is known as “digital illiteracy”, “the digital divide” or “computer illiteracy” and to offer everyone all the keys to appropriating digital technologies in order to ensure digital inclusion.

This programme was strengthened by the “digital inclusion” strand of France Relance⁸, since it is necessary *“to try to ensure that the whole country has access to it, since it’s a tool for development and increasing attractiveness to investors. We have to support it because it’s crucial. Not everybody knows how to use it. Not everyone has the resources or a computer.”*⁹

That said, the basic and inclusive dimensions of digital literacy do not always feature centrally in the policies pertaining to it.

The *France 2030* plan¹⁰, launched as a follow-up to *France Relance*, makes available 30 billion euros over 5 years in order to respond to future challenges facing sectors regarded as strategic

⁷ Agence Nationale de Cohésion des Territoires/National Agency for Regional Cohesion

⁸ France relance or Plan de relance économique de la France (2020-2022)/France's Economic Recovery Plan

⁹ Speech by the Prime Minister, Jean Castex, entitled *Egalité des Français devant le numérique*/Digital Equality for French Citizens, published 07/02/2022

¹⁰ France 2030 or Grand plan quinquennal d'investissement d'avenir/Five-year future investment plan, presented by the President of the Republic in a speech given on 12 October 2021

(energy, transport, health, food, farming, space and the seabed) by placing reliance on the technologies of the future and industrial competitiveness.

The declared conditions for success include “proficiency in sovereign and secure digital technologies” (meaning: cloud, quantum, 5G, cybersecurity, etc.) and “support for the emergence of talents and acceleration of the process of adapting training to the skills needed by the new industries and occupations of the future”.

While the term “digital” is increasingly establishing itself in everyday language and public policies and tends to be tagged on to all areas of human activity (digital administration, digital health, digital economy, digital education, etc.), what the term actually encompasses appears to be vast and protean, from the basics of the digital world to the most advanced digital technologies.

The term’s polysemic character encouraged us to investigate how the actors interviewed in the course of the present field survey perceived the digital challenge.

Adopting a qualitative approach, the survey was initially conceived around the *Cléa numérique* programme, since this is a jointly managed, inter-occupational certification scheme recognised in all industries nationwide that is focused on the digital basics, which made it an appropriate investigation target for a project on the development and recognition of basic digital skills for low-skilled workers.

Given the difficulty of identifying actors, particularly companies and employees, that had actually availed themselves of the *Cléa numérique* scheme and could be brought together in focus groups, it was decided to change the methodology and to conduct semi-structured individual interviews with actors concerned by the issue at various levels in order to obtain a broad range of perspectives.

Thus 11 interviews were carried out between April and July 2022, mainly face to face; 5 were conducted with **accredited *Cléa numérique* training organisations**, including the PIX public organisation that is also responsible for PIX certification, 2 with **organisations representing companies**, 2 with vocational training support agencies (*Opérateurs de Compétences* – OPCOs)¹¹ operating in sectors¹² that are labour-intensive and/or have a significant share of unskilled or low-skilled workers, 1 with the jointly managed national association responsible for the *Cléa socle*¹³ and *Cléa numérique* certifications and 1 with an individual who had been involved in the design and development of *Cléa socle* and *Cléa numérique*.

¹¹ 11 OPCOs were established following the 2018 reform of vocational training; they each cover several occupational groups. Their main responsibilities are to manage block-release training contracts, to provide technical support for the industries within their purview and to provide technical and financial support for companies with fewer than 50 employees in drawing up their skills development policies.

¹² An occupational group (*branche professionnelle*) is made up of firms in the same sector covered by a collective agreement signed by organisations representing employers and employees.

¹³ *Certification Socle de compétences et de connaissances professionnelles*/Foundation certification of vocational knowledge and skills (*Cléa socle*/Cléa Foundation), pursuant to Decree 2018-779 of 10 September 2018

The challenge of the digital transition in the world of work, particularly for the least skilled employees: the gap between words and deeds

While all the actors interviewed were agreed in recognising the great significance of the digital transition in the world of work, not all of them attach the same degree of importance to it or equate it automatically with a necessary increase in skill levels, and validation thereof, for all employees. The focus on the least skilled employees and those least connected to the digital world is not shared by all the actors.

The interviews reveal the existence of a **gap** between 1/ **acknowledgement of the importance of the digital transition** in the world of work, 2/ **an holistic perception and understanding of the impacts of the digital transition** in the workplace and 3/ **the incorporation of the digital transition into HR strategies and the adoption of concrete measures** to develop and validate digital skills in general and the basics of digital technologies in particular.

As far as the OPCOs are concerned, there is a **desire on both sides to get to grips with the challenge of the digital transition** and the need for a favourable external environment (public policies, financial levers pulled via EDECs¹⁴ for example) is highlighted in order to encourage initiatives in keeping with that objective.

Thus all the OPCOs have for several years (when they were still OPCAs¹⁵) been committed to the fight against illiteracy (which includes a digital strand) with the ANLCl.

However, **not all the OPCOs have made digital skills a specific entry key** for getting involved more broadly in tackling this challenge or made basic digital skills a top priority.

Some OPCOs, notably those covering sectors that have a significant share of jobs held by individuals with no or only very basic qualifications, **have tended rather to address the issue of basic digital skills** via the notion that they are **intertwined with more general basic skills** and that the two have to be tackled together.

For these OPCOs, the challenge of the digital transition is perceived to lie in both **the use of digital tools** and **proficiency in digital practices**. In order to meet this challenge, instruments and training measures have been designed to be made available to employers and employees. **Other OPCOs are in the process of incorporating the digital transition into their road maps for training and certification** but without necessarily at this stage of their planning emphasising basic digital competences.

The OPCOs interviewed noted that the **digital transition often crops up in discussions** but that **the policies of the various industries and sectors tend to be focused more on the *Certificats de Qualification Professionnelle* (CQPs or vocational qualification certificates)¹⁶** and that, for most companies, **HR strategies do not give priority to digital skills, and in particular to digital skills training for the least skilled employees.**

¹⁴ An Engagement de Développement de l'Emploi et des Compétences (EDEC)/Commitment to Develop Employment and Skills is an annual or pluriannual contract concluded between the state and industry-level organisations with the aim of anticipating the consequences of (economic, social, demographic, environmental, digital) change on jobs and skills and to adapt training and certifications accordingly. Jointly funded by the signatories, an EDEC generally consists of 2 parts, namely a prospective section and an actions section. An EDEC can be concluded at national or regional level.

¹⁵ Opérateur Paritaire Collecteur Agréé/Authorised Joint Collection Body

¹⁶ The CQPs are designed and issued by the various sectors or occupational groups (*branches professionnelles*) in order to attest to employees' proficiency in the skills associated with particular jobs or occupations.

These observations seem to be confirmed by the interviews conducted with the **industry organisations representing companies**. They **recognise the increasing importance of the digital transition** (thus “industry is less and less traditional and more and more digital”), but **they are not yet making the development and recognition of the corresponding skills, particularly basic ones, a central issue**.

On the one hand, **attention is focused on the CQPs**, which may include a digital dimension, not as a skill but as an assessment criterion. **Digital issues are not included as a matter of course but they do appear, with reservations**, depending on the extent to which digital technologies are reckoned to be diffused through the company.

Moreover, while it is **accepted that a minimum level of digital capability is required** in order to be able to work and progress in the sectors concerned, **preliminary steps to verify that capability and to identify gaps that need to be filled do not seem necessarily to have been taken**.

On the other hand, **when the challenges posed by the digital transition in terms of employee skills have been taken up, this has not yet been reflected in the development and recognition of digital skills**. The aim initially has been to launch a **large-scale initiative to raise awareness among companies** within each organisation’s purview. Experiments have been launched whose initial aim is not to develop employees’ digital skills but to act as a lever that will help to increase companies’ awareness of the digital transition within their organisation and in their HR strategies. **There is no particular focus on the basic digital capabilities**.

The importance of these capabilities was underscored by the **training organisations** interviewed, at a time when digital technologies are permeating all spheres of life. They emphasised how **important it is for jobseekers to master them in order to find employment, as it is for employees, particularly the low-skilled, in order to maintain their employability and to help them adapt to the rapid changes** caused by the digital transition. According to these training organisations, however, companies have not yet fully realised the importance of digital technologies, particularly in sectors and occupations that do not seem to be linked directly to the digital world. Companies tend to prioritise other issues (e.g. language and core job-related skills). What seems to be lacking is a holistic understanding among companies of the challenges posed by digital technologies, particularly for the least skilled employees. These technologies are being deployed at breakneck speed and employees’ preparation is not keeping pace. Rather than having constantly to play catch-up, companies need to anticipate change; however, more immediate constraints and problems tend to take precedence.

While these training organisations have been highlighting these aspects and taking action in the sphere of information and communication technologies for several years, it should be noted that **their offer is targeted mainly at job seekers** and that little has been done to promote training programmes for and certification of digital skills, particularly basic digital skills, among companies and their employees.

The existing certifications

The table below presents some descriptive information on the following certification schemes in digital skills:

- Cléa numérique*, the initial object of the field survey,
- PIX, which was included in the survey on the basis of the information derived from the initial interviews,
- PCIE-ICDL, which was mentioned in some of the interviews and by accredited *Cléa numérique* training organisations that were contacted for the survey but did not take part in the interviews because *Cléa numérique* had not actually been put into practice.

Cléa numérique	PIX	PCIE-ICDL
<p><i>Cléa numérique</i> is the first inter-occupational certification scheme, national in scope and jointly managed.</p> <p>It was developed in collaboration with the national ministries of education and labour; it is based in particular on the European Recommendation on Key Competences for Lifelong Learning and the ANLCI's reference framework for key competences at work.</p> <p><i>Cléa numérique</i> is governed by the decree on the common core of vocational knowledge and skills.</p> <p>In operation since 2019, it is listed in the Specific Register.</p> <p>It exists in a continuum with section #3 of the <i>Cléa</i> foundation certification, which relates to use of the standard digital information and communications technologies.</p>	<p>PIX is an on-line public service, launched as a state start-up and developed subsequently by a public interest group involving a broad panel of public actors¹⁸.</p> <p>The PIX certification of digital skills is governed by a decree issued on 30/08/2019.</p> <p>It is listed in the Specific Register.</p> <p>PIX was developed on the basis of the European reference framework DIGCOMP, whose 21 competences are reduced to 16 distributed over 5 key areas:</p> <ul style="list-style-type: none"> -Information and data -Communication and collaboration -Content creation -Protection and security -Digital environment <p>PIX is based on an algorithm that adapts the questions, tests and simulation exercises to the user's level in accordance with their previous responses.</p>	<p>The <i>Passeport des Compétences Informatiques Européen</i> or International Computer Driving Licence has existed since 1996.</p> <p>This international reference framework, developed by <i>ICDL international</i>, is constructed around 3 major families of skills: office, web and design.</p> <p>It is updated every 3 years and is compatible with the European DIGCOMP framework, covering 5 of its key areas.</p> <p>It is aimed at a wide variety of groups: employees, jobseekers, students and companies.</p> <p>According to the training organisations that mentioned the ICDL, it is not suitable for groups seeking to acquire basic digital capabilities.</p> <p>It comprises positioning tests, training modules (basic and advanced levels), on line or in person and international</p>

¹⁸ Ministry of Education; Ministry of Higher Education, Research and Innovation; Ministry of Labour; Ministry of Agriculture and Food; Office of the High Commissioner for Skills; ANCT; National Agency for Information System Security; National Centre for Distance Learning (CNED); French National Conservatory of Arts and Crafts (CNAM); Open University for the Humanities.

<p><i>Cléa numérique</i> is seen as the reference skills and certification framework for the basic uses of digital technologies.</p> <p>It is divided into four key areas: -identifying one's environment and using the associated tools; -acquiring and using information in a digitalised work environment; -interacting collaboratively; -applying the rules and good practices of digital safety.</p> <p>It is aimed at jobseekers and employees, principally the less skilled.</p> <p>It is implemented by a jointly managed national association that has overall responsibility, accredited organisations and assessment panels on which employers and employees are jointly represented.</p> <p><i>Cléa numérique</i> certification can be granted either directly after an initial assessment if the candidate can give proof of the various skills or after a training programme (there is no specific reference framework for training and freedom of choice when it comes to instructional design) and a final assessment if the initial assessment reveals some deficiencies. The initial and final assessments are conducted by accredited assessors (who are trained beforehand) from</p>	<p>PIX does not provide for any training as such; rather it offers a formative assessment and makes tutorials available. The online tests enable users to situate themselves in terms of their proficiency in digital skills and even to prepare for their attempt to obtain certification.</p> <p>The assessment for certification also takes place online, but at accredited centres that meet the requirements of a bill of specifications and in the presence of professionals.</p> <p>Besides proficiency in the general basic skills (reading, writing and arithmetic) and minimal computer skills (keyboard and mouse), award of the certification requires candidates to locate themselves at least at level 1 in 5 of the 16 competences.</p> <p>For each competence, a maximum of 64 PIX can be obtained. Thus the maximum obtainable score is 1064 PIX. Depending on the number of PIX obtained, candidates are ranked by level (from 1 to 8)¹⁹ and their profiles divided into categories ranging from "novice" to "expert".</p> <p>It should be noted that <i>France Compétences</i> recognises the upskilling value of certification for candidates who reach at least level 3 (which equates to the "independent" profile).</p> <p>The certificate is issued in electronic form and is valid for 3 years.</p>	<p>recognised certification (obtainable by passing modules).</p> <p>It is obtained through accredited centres located in France and internationally.</p> <p>In France, the ICDL is available in 8 different certifications listed in the Specific Register.</p>
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¹⁹ Levels 1 to 6 are currently available; levels 7 and 8 are still being prepared.

<p>organisations that are themselves accredited¹⁷. Lasting between 2 and 3 hours, they take the form of simulation exercises (example: scenario setting up a fictitious work-related situation that positions the candidate within a company's organisational structure and asks them to carry out the tasks associated with their function and that require the digital skills being evaluated) or more interviews and questions.</p> <p>The initial and final assessments have to be paid for; the cost of the final assessment is generally lower than that of the initial assessment.</p> <p>Depending on the candidates' profiles, some accredited organisations ask candidates to give proof of the skills required in section #3 of <i>Cléa</i> Foundation before they undertake the <i>Cléa numérique</i> assessment.</p> <p>The results of the candidates' assessments are recorded by on-line software.</p> <p>It is on this basis that a joint assessment panel decides whether or not to issue the <i>Cléa numérique</i> certificate.</p> <p>It is the jointly managed national association that draws</p>	<p>The initial positioning is free of charge but candidates are charged a fee for the certification assessment. The fees are fixed by the accredited centres.</p> <p>PIX is aimed primarily at school and university students and obtaining it has become obligatory at the end of lower and upper secondary school, CAP²⁰ and BTS²¹ programmes and the preparatory classes for the <i>grandes écoles</i>.</p> <p>The service is currently being opened up to other groups, including jobseekers and employees.</p>	
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¹⁷ Thus there is a double accreditation: accreditation of the centre and accreditation of the assessors at these centres. Besides presenting a CV demonstrating experience and expertise in the candidate's digital field, potential assessors seeking accreditation must also undertake training in the reference framework and the method of assessment and complete a trial assessment procedure.

The centres can obtain accreditation through the intermediary of the networks (e.g. the APP/Personalised Teaching and Learning Workshop Network) or federations (e.g.: Regional Union of Training Organisations/Union régionale des organismes de formation) of which they are members; if necessary, bilateral agreements are concluded between the network or federation and each of the centres to be accredited to deliver *Cléa numérique* certification.

Accreditation comes at a cost for the centres, which have to pay for a licence to deliver *Cléa numérique* (flat-rate fee for accreditation of the centres and a flat-rate fee for the accreditation and training of assessors).

²⁰ *Certificat d'Aptitudes Professionnelles* (level 3 qualification in the EQF)

²¹ *Brevet de Technicien Supérieur* (level 5 qualification in the EQF)

up the accreditation regulations and accredits the training organisations and assessors.		
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Opinions of *Cléa numérique* and PIX: no single clear perception

The scope of the survey questions having been widened so that they were no longer confined to *Cléa numérique* but had been opened up to other training and certification schemes in the digital field, the next step was to investigate the positioning of each of the schemes and how they were perceived by the various actors interviewed.

Several actors (training organisations, business organisations and OPCOs) expressed **reservations about companies' knowledge of *Cléa numérique* (to say nothing of the potential benefit of making use of the scheme).**

Whereas some training organisations assumed that companies were less well informed about *Cléa numérique* than about PIX or PCIE-ICDL, others tended to view PIX as being aimed more at jobseekers and *Cléa numérique* as being aimed more at employees (even though PIX is actually used mainly by school and university students).

Without tilting the scales in favour of either a positive or a negative judgement, several characteristics seem to set the two certification schemes apart from each other depending on the actors interviewed.

Cléa numérique places digital technologies in a **work-based context**, while PIX seems to be oriented more towards **digital citizenship**.

At the very least, **perceptions of the work-based contextualisation differ**. For *Cléa numérique*, which belongs intrinsically to the world of work, this contextualisation necessarily implies adjustment to the specific characteristics of an occupation or sector; for PIX, which positions itself in the digital world at the intersection of the private, civic and work spheres, the work-based contextualisation implies a narrowing of the fields covered, with a focus on the world of work.

Cléa numérique seems to offer greater flexibility and more opportunities in terms of work-based contextualisation.

Cléa numérique includes a **human dimension** through the **support** it offers and its advanced **teaching and learning methodology**, while PIX relies on an **adaptive algorithm** and an **online independent approach to learning**.

Cléa numérique may seem to be **“lengthy and tedious”** while PIX may seem to be more **“fun”** and **“flexible”** when it comes to assessments.

Cléa numérique is targeted more at low-skilled groups, while PIX seems accessible **to a far wider range of people**.

PIX relies on companies managing the programme independently via the PIX orga platform.

Cléa numérique enables users to obtain a **“paper qualification”** (with all the symbolic weight that such a qualification possesses) while PIX operates like language proficiency tests such as TOEIC or TOEFL by assessing users' level of proficiency and awarding them a **score**.

The actors interviewed expressed different opinions on the relative positioning of *Cléa numérique* and PIX, with some believing them to be in **competition** with each other and others seeing them as **complementary** to or even as **extensions** of each other.

Among the training organisations, there was a feeling that for jobseekers and even for employees there is a form of competition between PIX and *Cléa numérique* that is hampering the latter's roll-out. **PIX does, after all, offer a free initial assessment, which is used by advisors in the public employment services.** It also benefits from the significant communication and promotional resources at its disposal at national level, in contrast to *Cléa numérique*.

For other actors, *Cléa numérique* and PIX may complement or even extend each other (albeit not always in the same way).

Thus measures have been put in place to encourage **Cléa numérique + PIX dual certification**. Accordingly, it is possible to prepare for *Cléa numérique* certification through a PIX pathway that specifically replicates the requirements of *Cléa numérique* (a pathway that does not equate to a specific PIX level but incorporates items taken from PIX levels 2 to 4).

For some, **PIX may seem to be an extension of Cléa numérique** in that it enables users to go further (beyond level 4) and to extend their skills to dimensions other than those strictly related to work.

For others, **Cléa numérique may seem to be an extension of PIX** in that PIX attributes a level of digital capability without guaranteeing that the skills thus certified can be deployed in a specific work environment, which is what *Cléa numérique* validates. The latter scheme does indeed guarantee digital autonomy in a given job.

Thus it would appear that there is no single clear perception of either certification scheme or of their respective benefits.

Nevertheless, there would appear to a consensus view that **Cléa numérique is more suited to the least autonomous and least skilled individuals.**

The *Cléa numérique* and PIX target groups: employees still not very involved

It emerges from the interviews that **use of Cléa numérique is still limited in general terms, and in particular among employees,** and that **PIX, which was initially oriented towards school and university students, is gradually opening up to employees.**

It should be noted that a **significant number of Cléa numérique accredited training organisations have not implemented the scheme since they were accredited or have done so only sporadically.**

Despite the limited use of *Cléa numérique*, it is possible, on the basis of a few trials conducted by the training organisations interviewed, to construct a typology of the groups described as **“social targets”**.

Until now, the majority of the people who have obtained *Cléa numérique* certification have been **adults, jobseekers very remote from employment and training and employees on subsidised contracts** (in resale shops, work integration social enterprises, sheltered

workshops etc.) in the social and solidarity economy (SSE) and inclusion through economic activity programmes²².

Nevertheless, **several of the actors interviewed consider that *Cléa numérique* “is not as basic as all that” and that it could target a wider range of employees** (including those with higher skill levels). In their view, the *Cléa* brand seemed initially to be strong, but it may perhaps be restricting the use of *Cléa numérique*.

As far as **PIX** is concerned, having been **developed initially in the context of initial education**, the vast majority of its users are school and university students.

That being the case, PIX is trying **to open up to other social groups**.

It has also extended delivery of its certification to continuing training organisations, trialled some initiatives with some OPCOs and employers' groups and made available to HR and training managers PIX Orga, which can be seen as a monitoring and management platform.

Thus PIX does have some **users in the world of work and labour market integration programmes** (jobseekers and employees are included in the same category) although they account for only a small share of all PIX user groups²³.

It should be noted that the schemes mentioned in the interviews, including PIX, are all part of the general programmes aimed at all employees in the companies in question, **without the least skilled workers or those with least connection to digital technologies being specifically targeted**.

The uses of *Cléa numérique* and PIX: limited use of the reference frameworks, and not routinely with training and/or certification in mind

Thus employees turn out to make very limited use of *Cléa numérique* and PIX, and even when they do so, it is not necessarily with training or certification in mind.

With regard to *Cléa numérique*, it is helpful to recall the **use that was envisaged** when the scheme was in the planning stage. The aim, **in a burgeoning area of digital training**, was to offer a certification with markers that would give users **a point of reference that was both work-related and social**.

Faced with the proliferation of digital training offers, the *Cléa numérique* certification scheme was to constitute a point of reference towards which the various offers could converge and to which all the actors in the occupational field could refer.

Thus a connection was planned between the various training pathways and certification.

²² In 2021, 1,597 *Cléa numérique* certifications were issued nationwide; 29% were issued to employees and 67% to jobseekers (figures from Certif Pro).

²³ In 2021, 500,000 PIX certifications were awarded to school students, 50,000 to university students and 5,000 to jobseekers and employees.

As it turns out, the small number of trials conducted by the training organisations interviewed show that *Cléa numérique* is being used **in order to test digital skills in preparation for seeking employment** in a specific area of activity or occupation, **to determine supplementary training needs** (sometimes provided during the hours of training stipulated in labour market integration contracts, with a focus on a specific occupation), **to confirm a career plan and to validate (digital) conditions prior to recruitment and, finally, for individuals to check their capabilities and highlight their skills and for groups that do not generally have any formal qualifications to obtain a certification.**

The training organisations interviewed reported positive feedback from the small number of individuals who had used *Cléa numérique*. In most cases, they had undertaken the assessments and completed personalised and contextualised training programmes (adaptation to the work environment, to an occupation, to the tools used etc.). Thus obtaining *Cléa numérique* certification led to a rise in skill levels as well as to increased self-confidence and autonomy, greater awareness of the risks associated with digital technologies and, in some cases, the elimination of resistance to digital technologies or even the development of a certain degree of enthusiasm.

In these cases, *Cléa numérique* has become part of **the dynamic of individual career pathways**, within which it can lead to **positioning** (better knowledge of the skills already possessed and/or to be acquired), **the development of digital as well as transversal skills**, an **increase in the personal and professional value** of the skills through certification (which for some individuals is the first formal qualification they have obtained) and more **work-related opportunities** (access to jobs, progress in performing one's function).

From the OPCOs' point of view, if *Cléa numérique* were to be used, **the aim would be to make it not an end in itself but rather a stage in a pathway.**

As far as **PIX** is concerned, when it is used for employees, it is as a **tool for raising awareness** of the challenge of the digital transition or for **assisting in the construction of HR strategies.**

Those actors who referred to PIX (OPCO, business organisation) did so **in the context of an experiment or the construction of a service offer** targeted at companies in order to **encourage them to take up the challenge of the digital transition, particularly with regard to current and future skill requirements.**

For example, PIX has been used **to identify digital skill needs in a series of occupations**, its reference framework having been combined with those of the occupations in question during field observations.

PIX has been introduced into a programme for which companies and employees in an occupational group can register voluntarily and which gives HR managers access to information that **positions employees** in terms of their digital skill levels and enables them to identify any possible gaps or difficulties.

Thus PIX can be used to make a sort of **diagnosis** that may be a preliminary stage in the development of an HR skill strengthening strategy. Use of PIX may help to **(re)motivate employees**, some of whom may have little connection with training and certification.

In this case, PIX is a means of assessment; **companies are free to choose whether or not to undertake an assessment with a view to obtaining certification or even to undertake**

an assessment and then organise a training programme depending on the needs identified and obtain a certification.

From the point of view of making PIX more accessible to groups in the labour market, the idea would be for PIX to become the **new reference standard for companies**, including in the recruitment phase (with an objective score indicating a level of competence).

The obstacles to the development and recognition of the basic digital skills and to the use of existing reference frameworks

Thus it has to be acknowledged that access to *Cléa numérique* and PIX remains limited for employees. Several reasons for this slow roll-out were mentioned by the actors interviewed.

One of the first obstacles to the roll-out of digital certifications and any corresponding training measures lies in the **failure by all the parties involved (OPCOs, industries, companies, training organisations and employees) to prioritise the digital challenge, and in particular the basic digital skills, by making concrete commitments (on measures and timescales and the corresponding funding).**

The launch of *Cléa numérique* and the opening-up of PIX to groups in the world of work coincided with the **reform of vocational training**²⁴ as well as with the **COVID-19 pandemic**, both of which caused disruptions at various levels and led to a number of adaptive measures that took precedence.

Besides these external factors, it also appears that the development and recognition of basic digital skills are not key elements of the actors' strategies. The **occupational groups tend rather to give priority to the CQPs (vocational qualification certificates), while companies' preference is for training leading to certification and training programmes that are less generalist and transversal**, which may lead to accreditation. The same applies to **employees, who tend to opt in the first instance for training in specific occupations** that will improve their operationality at work. **Career counsellors and funding bodies show little enthusiasm for *Cléa numérique*** (the employment service Pôle Emploi seldom instructs its clients to use the scheme, as opposed to frequent instructions to use *Cléa socle*, *Cléa numérique* does not have a very high profile in the regions because of their compliance with the competition rules governing public procurement and the funding for dual *Cléa numérique*/PIX certification initially provided for in the Economic Recovery Plan has not been forthcoming).

While **the vast majority of the training organisations interviewed emphasised the lack of funding** as an obstacle to the development of *Cléa numérique* in particular, **the actors in the world of work tended rather to play down the importance of inadequate funding as an obstacle**. According to them, **funding levers are available, through EDECs for example**. These EDECs may also have the advantage of encouraging **the social partners to become**

²⁴ Act of 5 September 2018 on the Freedom to Choose One's Professional Future.

involved, which may prove to be a driving factor in raising awareness among those involved and implementing the necessary measures.

However, the question arises of the type of measures for which this funding is earmarked. While it does indeed provide **a framework and resources** for putting measures in place and developing tools for **raising awareness, making diagnoses and identifying skill needs, which may be based on reference frameworks such as PIX**, does this funding **encourage and cover the associated costs of measures to develop and certify skills, particularly for those employees with least connection to digital technologies?** Or does it just provide the initial impetus and then leave it up to employers or even to employees to fund such measures?

No explicit responses to the question of funding at the micro level were given in the course of the interviews (which is explained in part by the fact that very few measures for the development and certification of (basic) digital skills have actually been put in place).

Mention was made of the **possibility** for companies to include such measures in their **skill development plans** via direct funding or a contribution from the personal training accounts (comptes personnels de formation/CPF) for that purpose.

It was stated that *Cléa numérique* is **eligible for funding from the Pro A scheme**²⁵, but it seems that **companies have as yet made very little use of this scheme** in general terms, which does not help to bring *Cléa numérique* into it.

Possible funding from **personal training accounts** was mentioned on several occasions, particularly by officials from the OPCOs and business organisations, reflecting a collective strategy on the part of employers that is still limited in this respect.

Furthermore, while obtaining certification requires a training pathway, the cost of assessments and of training time can, depending on the individual cases, be difficult to cover with the amount available in personal training accounts.

Finally, it should be noted that, **besides the question of whether sufficient funds are available in personal training accounts and that of the transfer of responsibility for the development and certification of skills, using personal training accounts to fund training in basic digital skills raises the question of access for individuals with little connection to digital technologies.** In order to draw funds from a personal training account, it is necessary to log on to an account and complete a number of online procedures²⁶, which of course requires basic digital skills, whereas the training in question is intended for those seeking to acquire precisely those skills.

The **PIX-based experiments** that were referred to during the interviews are being coordinated **at the level of the OPCOs or business organisations**; their principal aim is to galvanise companies into acknowledging the challenges of the digital transition and putting in place integrated and concrete measures to deal with them, particularly with regard to their employees' skills.

These experiments are **being financially supported via EDECs** and the companies involved are able to negotiate **preferential rates, with PIX for example**, for a fixed period.

²⁵ The Pro A scheme was put in place following the 2018 reform of vocational reform in order to encourage retraining or promotion on a block release basis. It is aimed at employees whose level of qualification is lower than EQF level 6. Companies can obtain funding from the OPCOs.

²⁶ Since 2019, personal training account funds can be accessed directly and exclusively from the *Moncompteformation* website or mobile app.

These experiments **do not necessarily include any measures (or the corresponding funding) to strengthen and certify digital skills, particularly digital basics.**

In the case of one of these experiments, the companies making use of PIX and making financial contributions have a range of objectives in mind. The companies, which are involved voluntarily, can offer their employees, also volunteers, a choice between a “basic” PIX assessment (a sort of positioning test not leading to certification) and a “complete” PIX assessment (leading to certification); these assessments can be either organised and supported (taking place during working hours, with rooms and computer equipment made available) or more informal, taking place outside of working hours and the company’s premises. Since the experiment has been going on for only a short while, there is as yet little clarity about any possible future developments in terms of training and certification measures.

Over and above the strategic and financial obstacles, the **lack of information and knowledge** on the available certifications, and particularly on *Cléa numérique*, is identified as a further barrier to their roll-out.

Cléa numérique suffers from a **lack of visibility and promotion**. For some, what is needed is a large-scale, nationwide communication campaign, delivered by the public authorities, the OPCOs and the social partners via the occupational groups. For others, it is up to the organisations that have been accredited to implement such an information campaign.

Difficulties in comparing the certifications and a lack of connection between the certifications and the existing training provision limit their attractiveness and neither facilitate decision-making nor encourage steps to develop and recognise (basic) digital skills. Furthermore, an OPCO representative noted **the difficulty in finding appropriate training measures for their employees** and training organisations able to offer pathways adapted to employees’ specific needs and schedules. **Most of the training organisations accredited for Cléa socle and Cléa numérique seem to operate largely on the basis of public procurement contracts that tend to be targeted at jobseekers.** However, raising awareness among companies and persuading them to take steps to develop and recognise (basic) digital skills, which require a good deal of time and energy, cannot be done without having training programmes to offer them that include a comprehensive set of teaching methods differentiated according to individual positionings and work environments, which does not yet seem to be the case.

Key points and possible avenues for improvement

Besides the obstacles already identified, certain key points and several possible avenues for improvement emerged in the course of the interviews.

An **extended incentivising framework** (public policies and dedicated funding) seems essential in order to impart some impetus and make available sufficient resources, **not only for efforts to raise awareness among companies and general understanding of the challenges** of the digital transition in the world of work **but also for the acquisition and recognition of basic digital skills for employees**, in order to encourage a truly inclusive digital transition.

It is important **to dedicate funding to specific objectives: proficiency in the basics of digital technologies** for all employees and **consolidation of their digital skills in the light of rapid changes** in the area, leading to **certifications** that constitute “markers of employability” that will be useful throughout the working life. The **roads to achieving** this proficiency and consolidation may be many and various and form part of **personalised pathways**.

Particular attention should be paid to those groups with least connection or contact with digital technologies (for various reasons) for whom **information, assistance, support and organisation (particularly with regard to equipment) should be strengthened**.

Putting everything online may not be appropriate for those individuals not familiar with the tools and basic uses of digital technologies, who may have developed a certain degree of resistance to or even inhibitions concerning the digital world.

The **risk of stigmatisation** should also be taken into consideration when devising ways to tackle the problem and implement measures.

The question of the development and recognition of basic digital skills for employees should be **approached in a systematic and integrated way by combining:**

- long-term measures to raise awareness among and make the argument to employers and HR managers, middle managers and employees** (adopting a non-stigmatising discourse and position with those experiencing difficulties with digital technologies),

- measures to identify the impacts of digital technologies on work activities and skills,**

- training for HR and middle managers to identify** those employees experiencing the greatest difficulties with digital technologies,

- measures to position employees** vis-à-vis the digital basics and the digital requirements of their jobs,

- individualised and contextualised training pathways leading to certification,**

- post-training support and follow-up measures,** which could be based around digital specialists within companies who would receive prior training and whose schedules and pay would be adjusted in order to incorporate this new role.

The aim is to encourage the **diffusion within companies of a culture of continuous development of skills in general, and digital skills in particular, for all employees**.

Consideration should be given to the idea of **introducing a compulsory common core of digital skills**, which would lead companies to take the measures required for all their employees to achieve a minimum threshold of digital skills.

The aim is also to **provide more information** on the existing certifications, on the use value of *Cléa numérique*, on its complementarity with PIX and on the value of PIX as a point of entry into a digital skills development strategy.

A final aim is for training organisations **to offer teaching and learning pathways suitable for those groups of employees** that are seeking to master the digital basics and to update their digital skills on a regular basis, in conjunction with the existing certifications.

Concluding remarks

The digital transition, which necessarily entails a development of digital skills, has somewhat forcefully infiltrated the French public debate, as reflected particularly in the government's recent strategies.

From the latest reform of vocational training (Act no. 2018-771 of 5 September 2018 on the Right to Choose One's Professional Future) via the economic recovery plan *France Relance* right up to the *France 2030* plan, the digital world has been invoked as a strategic challenge for the country.

Nevertheless, its omnipresence in the debate has produced a high level of **polysemy** and a proliferation of interpretations and uses, including in the world of work, ranging from the digital basics, understood as the minimal skills required in order to be able to operate in a digitalised work environment (and more broadly in a digitalised society), to the cutting-edge, innovative digital technologies operated by a more limited and specialised category of highly skilled individuals, the number of whom is expected to rise as the digitalised economy expands.

Although it is not exhaustive, the qualitative survey we conducted has enabled us to make some initial observations about the development and recognition of basic digital skills for employees, and particularly the least skilled and those least able to operate independently in a digitalised environment.

It has also enabled us to compile a **sketch of the uses of the Cléa numérique and PIX reference frameworks for employees**, which has revealed several key points and levers to be pulled with a view to extending their use and making them more conducive to the acquisition and certification of basic digital skills.

The interviews we conducted confirm the polysemic nature of the digital transition and the diverse perceptions of the challenges it presents depending on the actors interviewed, which do not necessarily include the digital basics.

Thus the interviews reveal that **the issues raised by the fight against the digital divide and digital illiteracy have still not been fully appropriated** by many interlocutors in the world of work, who have so far failed to acknowledge the full extent of the issues raised or to engage fully with efforts to formulate responses to them.

Thus what is required, firstly, is to launch a large-scale campaign to raise awareness of the issues associated with proficiency in the basic digital skills and the recognition thereof, regardless of the sector of activity or occupation, and particularly with regard to the least skilled employees and those least familiar with digital tools and their uses.

This awareness campaign, combined with a drive to equip and strengthen the capacities of the parties concerned at various levels, could **draw on existing initiatives and experiments financed and managed at the level of the OPCOs or the occupational groups** (often within the framework of an EDEC).

Besides awareness raising and support, effective action to promote the acquisition and recognition of the digital basics requires the availability of an appropriate training offer and certifications.

In this respect, while the *Cléa numérique* reference framework tends to contextualise digital technologies more strongly in the world of work and is intrinsically oriented more towards (less skilled) groups in the world of work than the PIX reference framework, both of them seem to open up prospects for training pathways adapted to employees' needs and leading to certification. Nevertheless, particular attention should be paid to the fact that the PIX certification process is online only, which may constitute an obstacle for those employees less able to use digital technologies independently.

For the moment, however, **both reference frameworks are still little used by employees**, and seem to go largely unrecognised either by companies or by employees.

Cléa numérique is used a little more by jobseekers, following on in a continuum from *Cléa socle*, although the public employment service issues far fewer instructions to use *Cléa numérique* than it does for *Cléa socle*.

There are also numerous organisations that have been accredited for *Cléa numérique*, many of which operate on the basis of public commissions, that have not yet put their accreditation into practice.

As for PIX, it was first developed for use in initial education, and so the majority of its users are high school and university students.

There is a perceptible desire to open up and adapt to groups in the world of work. This is gradually being realised, particularly through the accreditation of continuing training centres and experimental schemes with OPCOs or employers' groups. It is also reflected in the work to link up with *Cléa numérique* that has been carried out and as a result of which it is now possible to envisage dual PIX / *Cléa numérique* certification.

Since it is by no means self-evident that the actors at company level relate to *Cléa numérique* or PIX, there is no consensus as to how their target audiences, use values, respective benefits and the relationship between the two are perceived.

This is further compounded by a difficulty linked to the disconnection between the assessment and certification procedures associated with *Cléa numérique* and PIX and the training processes that can arise from or lead to PIX and *Cléa numérique* certification.

This disconnection between the available training in digital skills and the certification of those skills, the proliferation of training courses and of certifications for digital skills (at all levels) that undermines their intelligibility and the lack (noted by actors at firm level) of training offers adapted to employees' specific characteristics and schedules are all current obstacles to increased use of *Cléa numérique* and PIX by employees.

Moreover, when the *Cléa numérique* and PIX reference frameworks are used for employees, it is not necessarily with training and/or certification in mind. They may be used for the purposes of job assessments or positioning employees. Such assessments and positioning exercises

may be preliminary stages in the development of HR strategies and the construction of skill development plans that include digital skills, especially basic ones. Nevertheless, it would seem that **the digital basics are seldom considered at company and industry level as a priority to which time and funding should be devoted.**

Furthermore, it has to be noted that, in certain discourses, the initiative (and hence the responsibility) for the development and validation of basic digital skills tends to be delegated to employees, given that they are able to draw on their personal training accounts for that purpose.

Besides this delegation of responsibility for skill development to employees, the reference to personal training accounts raises other questions. Are the funds available in such accounts sufficient to cover the cost of the training pathways leading to certification that meet employees' requirements? Could or should employees undertake that training in their own time or during working hours? Will employees who are less "digitally savvy" be able to access their training account, which can only be done on line?

To conclude, while the two reference frameworks, ***Cléa numérique*** and **PIX**, both recently introduced, are not yet widely rolled out among employees, **there is clearly some potential for them to be appropriated by the parties concerned and adapted to the needs of employees.** It would appear that the realisation of this potential is not only necessary but has to be called for by political decision-makers. This requirement must be combined with an effective incentivising framework that dedicates funding and other resources to specific objectives, in this case proficiency in and recognition of basic digital skills for employees. It is based on a systemic approach that links actors inside and outside companies and combines long-term measures.