

### **Putting Skills to Work in the Digital Labour Market**

Conference on European Skills, Qualifications and Occupations 2-3 April 2019, Warsaw

#### **Dimitrios Pikios**

Project Coordinator ESCO

**European Commission** 

DG Employment, Social Affairs and Inclusion

## Mobilising skills in a digital labour market

People find jobs online

Employers manage HR and recruitment with IT

Skills are main tool of job matching instruments

Talent platforms are cornerstone of labour market



## **Difficulties finding staff**

4 out of 10 employers have difficulties finding staff with the right skill set

Inefficient labour markets

Skill gaps of workforce

Digital technologies can increase efficiency and tackle skill gaps



## **Talent platforms**

Potentially add 5.2 million jobs and increase GDP by EUR 360 billion (2015 McKinsey Global)

Higher labour market participation

More, better and faster matches

Better informed career decisions



## EU goals in digital labour market

Better link education-training to labour - ensure access to the best opportunities

Ensure transparency of information on skills through systems' interoperability

Allow open-fair access to information on skills, qualifications, jobs and training

- → avoid monopolisation of data in digital labour market
- → European open standards to counteract risks of proprietary standards



European open standards

European Qualifications Framework

Monitoring of labour market



# European open standards for an open and inclusive digital labour market

Reduce mobility barriers by reducing barriers in the digital space

Communication of skills-qualifications across languages and national standards

Understanding and trust of information



## **European Qualifications Framework**

Translation grid for qualifications across countries

8-Level reference framework, covering all types and all levels of qualifications

Defined in terms of learning outcomes (knowledge, skills, responsibility & autonomy)



## **EQF Objectives**

Transparency, comparability and portability of people's qualifications

Employability, mobility and social integration of workers and learners

Linking formal, non-formal and informal learning

Supporting the validation of learning outcomes acquired in different settings



## Main impacts of the EQF

Development of NQFs in Europe (from 3 to 43 in 10 years time)

Interconnected landscape of EQF and (diverse) European NQFs

Development of a comprehensive "map" of qualifications in Europe

Mutual learning between European NQFs (building trust)



## **Monitoring of labour market**

Big data analysis of skills required by employers in online vacancies

Better understand changing nature of jobs and gain insights on future skills

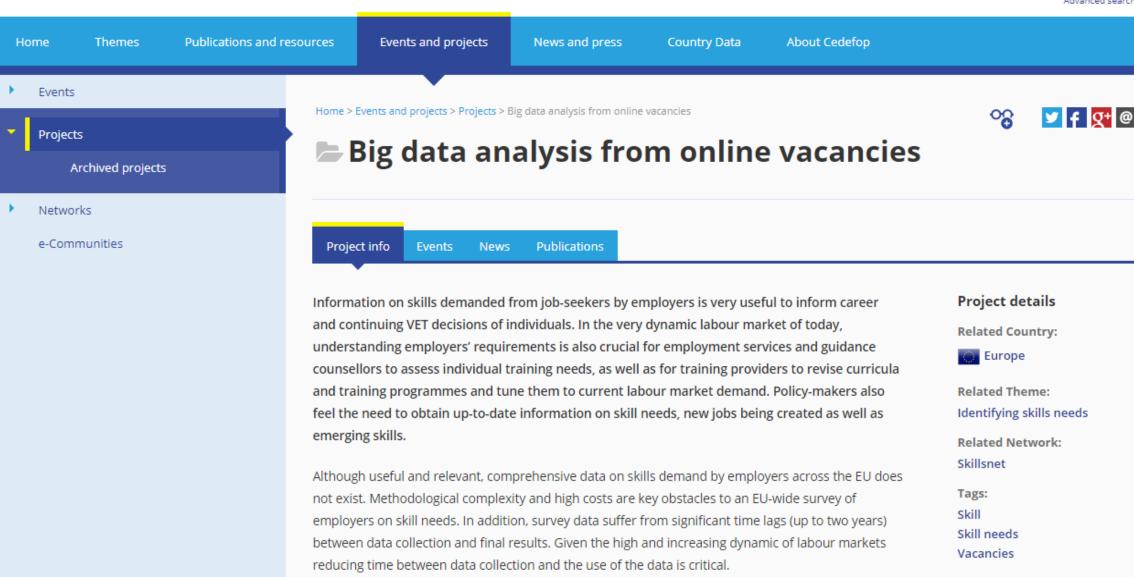
Inform policy makers, education providers and jobseekers-learners

CEDEFOP is preparing a Europe-wide system on behalf of the Commission





Advanced search



Over the last decade, the usage of online platforms for posting job vacancies significantly increased, including for advertising jobs of different types and levels. The Internet has become a rich source of

# CEDEFOP's big data analysis from online job vacancies

Inform career and training decisions of individuals

Allow employment services to understand employers' requirements

Enable guidance counsellors to assess individual training needs

Training providers to revise training programmes

Policy makers to obtain up-to-date info on skill needs and new jobs created



# EU reference frameworks and open standards for the digital labour market:

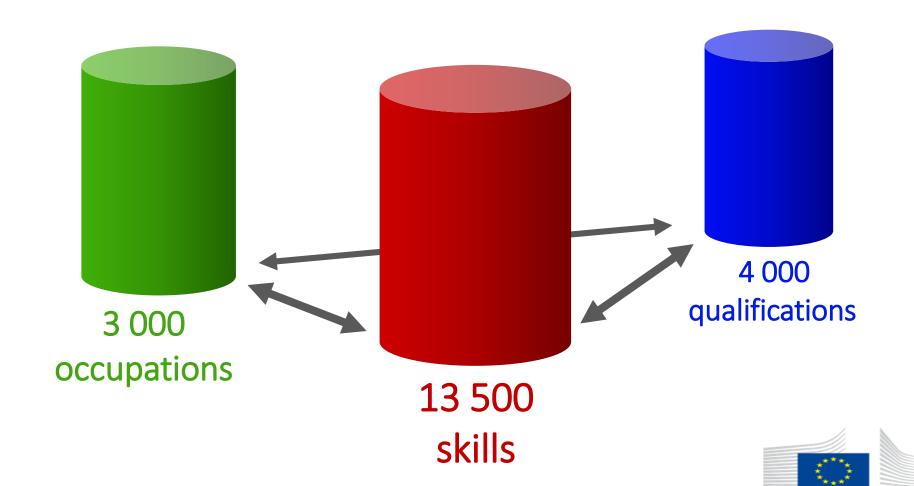
**ESCO** 

**New Europass** 





## 3 ESCO pillars



European Commission

### **ESCO** in a nutshell



Reference language for employment and education

Creates a shared understanding

Helps to cooperate across borders and languages





carp' n, p carp vb to complement of the control carpark n an area or building reserved for eground rth parking cars, the female reproductive organ of a cars
carpel 11 plant. res flowering na person who makes or repairs

carpenter na person who makes or repairs or sly: carpentry n the skill or work of a carpenter. carpet n 1 a heavy fabric for covering floors. 2 a
carpet n like a carpet: a carpet of leave and carpet of like a carpet: a carpet of leaves. 3 on the e a carpet Informal being or about to be reprimand ed. 4 sweep something under the carpet to conceal or keep silent about something that or in or omorofes-



#### **ESCO**

#### European Skills/Competences, qualifications and Occupations

European Commission > ESCO > Occupations > carpenter



**ABOUT ESCO** 

& CLASSIFICATION

**™** TOOLS & RESOURCES

Print

Full concept and his

English (en)

------ Occupations ------ Qualifications ------ Qualifications ------

#### carpenter

#### Description

Carpenters cut, shape and assemble wooden elements for the construction of buildings and other structures. They also use materials such as plastic and metal in their creations. Carpenters create the wooden frames to support wood framed buildings.

Alternative label

craftsman carpenter commercial carpenter heritage carpentry craft carpenter joiner woodworker

carpentry framer

Essential skills and competences

apply wood finishes

clean wood surface

create smooth wood surface

create wood joints

follow health and safety procedures in construction

identify wood warp

inspect construction supplies

install construction profiles

install wood elements in structures

install wood hardware

interpret 2D plans

interpret 3D plans

join wood elements

keep sawing equipment in good condition

keep track of wooden elements

snap chalk line

sort waste

transport construction supplies

use measurement instruments

use safety equipment in construction

work ergonomically

Essential Knowledge

types of wood

wood cuts

woodworking tools

Optional skills and competences

answer requests for quotation

apply restoration techniques

assess conservation needs

Villa Competences

#### Q Search

#### **₺ OCCUPATIONS**

- > 0 Armed forces occupations
- > 1 Managers
- > 2 Professionals
- > 3 Technicians and associate profess...
- > 4 Clerical support workers
- > 5 Service and sales workers
- > 6 Skilled agricultural, forestry and f...
- > 7 Craft and related trades workers
- > 8 Plant and machine operators and ...
- > 9 Elementary occupations

#### English (en)

## **Occupations**

2942 occupations

The occupations pillar is one of the three pillars of ESCO. It organises the occupation concepts in ESCO. It uses hierarchical relationships between them, metadata as well as mappings to the International Standard Classification of Occupations (ISCO) in order to structure the occupations.

Each occupation concept contains one preferred term and any number of non-preferred terms and hidden terms in each of the ESCO languages.

Each occupation also comes with an occupational profile. The profiles contain an explanation of the occupation in the form of description, scope note and definition. Furthermore, they list the knowledge, skills and competences that experts considered relevant terminology for this occupation on a European scale.

#### មៃ OCCUPATIONS

- > 0 Armed forces occupations
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- > 4 Clerical support workers
- > 5 Service and sales workers
- > 6 Skilled agricultural, forestry and f...
- 7 Craft and related trades workers
- → 71 Building and related trades ...
  - 711 Building frame and relat...
  - > 7111 House builders
  - > 7112 Bricklayers and rela...
  - > 7113 Stonemasons, ston...
  - > 7114 Concrete placers, c...
  - > 7115 Carpenters and join...
  - > 7119 Building frame and ...
  - > 712 Building finishers and re.

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## **Transversal Skills**





 Through their relationship with occupations, i.e. by using occupational profiles as entry





European Skills/Competences, qualifications and Occupations

European Commission > ESCO > Skills/competences



**ABOUT ESCO** 

& CLASSIFICATION

**™** TOOLS & RESOURCES

Q

⊜

------ Occupations ------ Skills/competences ------ Qualifications -------

English (en)

Q Search all skills

- > attitudes and values
- > application of knowledge
- > social interaction
- > thinking

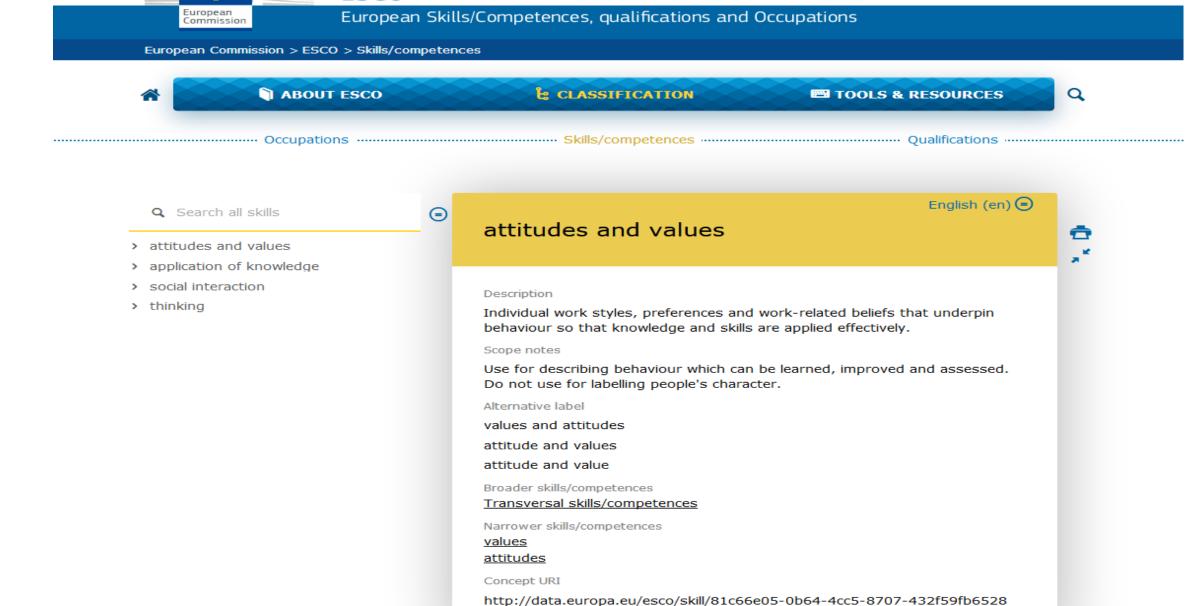
#### Skills

13485 skills / competences

Not all ESCO skills can be accessed through the existing hierarchy.

The ESCO skills pillar distinguishes between i) skill/competence concepts and ii) knowledge concepts by indicating the skill type. There is however no distinction between skills and competences. Each of these concepts comes with one preferred term and any number of non-preferred terms and hidden terms in each of the ESCO languages. It also includes an explanation of the concept in the form of description, scope note and definition. The skills pillar of ESCO does not contain a full hierarchical structure but is structured in four different manners:

 Through their relationship with occupations, i.e. by using occupational profiles as entry



Q Search all skills

> attitudes and values

- > application of knowledge
- > social interaction
- > thinking

#### English (en)



#### social interaction

#### Description

Ability to engage effectively and in a goal-directed manner with other people encountered at work or study, e.g. with colleagues, peers, customers, clients and patients.

Alternative label

#### social interactions

Broader skills/competences

#### Transversal skills/competences

Narrower skills/competences

address an audience

demonstrate intercultural competence

support colleagues

give advice to others

use body language

use questioning techniques

report facts

motivate others

instruct others

lead others

negotiate compromise

interact with others

accept constructive criticism

work in teams

persuade others

Concept URI

http://data.europa.eu/esco/skill/8f18f987-33e2-4228-9efb-65de25d03330

- (3)

- > attitudes and values
- > application of knowledge
- social interaction accept constructive criticism address an audience demonstrate intercultural competence give advice to others instruct others interact with others lead others motivate others negotiate compromise persuade others report facts support colleagues use body language use questioning techniques work in teams
- > thinking

#### lead others



Guide and direct others towards a common goal, often in a group or team.

Scope notes

Excludes people performing management.

Alternative label

leading others

guide others

supervise others

direct others

show leadership attitude

lead

take on a leadership role

Skill type

skill

Skill reusability level

transversal skills and competences

Broader skills/competences

social interaction

Narrower skills/competences

lead healthcare services changes

supervise camera crew

manage secondary school department

manage aspects of airspace management

lead military troops

oversee animal management

supervise medical residents

manage multiple patients simultaneously

plan procedures for cargo operations

business management principles

oversee assembly operations

lead a team in forestry services

manage volunteers in second-hand shop

manage media services department



## **Digital Skills**





**ESCO** 

#### European Skills/Competences, qualifications and Occupations

European Commission > ESCO > Skills/competences



**ABOUT ESCO** 

& CLASSIFICATION

**TOOLS & RESOURCES** 

Q

------ Occupations ------- Skills/competences ------ Qualifications ------------

All skills

Transversal skills and competences

- Digital competencies <
- Language > dic
- > digital communication and collaborati...
- > problem-solving with digital tools
- > digital content creation

English (en)

#### Skills

skills / competences

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· Through their relationship with occupations, i.e. by using occupational profiles as entry

<u>digital competencies</u>



- > ICT safety
- digital data processing
   browse, search and filter data, infor...
   evaluate data, information and digit...
   manage data, information and digit...
- > digital communication and collabor...
- > problem-solving with digital tools
- > digital content creation



# manage data, information and digital content



X

Description

Organise, store and retrieve data, information and content in digital environments. Organise and process them in a structured environment.

Skill type

skill

Skill reusability level

transversal skills and competences

Broader skills/competences

<u>digital data processing</u>

Narrower skills/competences

store digital data and systems

use databases

manage digital documents



- > ICT safety
- > digital data processing
- digital communication and collabor... collaborate through digital technolo... engage in citizenship through digita... interact through digital technologies manage digital identity share through digital technologies use online conventions of netiquette
- > problem-solving with digital tools
- > digital content creation











Description

Communicate in digital environments, share resources through online tools, link with others and collaborate through digital tools, interact with and participate in communities and networks, cross-cultural awareness.

Alternative label

digital communications

collaboration

paperless communication

digital communication and

electronic communication

Broader skills/competences

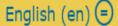
<u>digital competencies</u>

Narrower skills/competences

use online conventions of netiquette share through digital technologies



- > ICT safety
- > digital data processing
- digital communication and collabor... collaborate through digital technolo... engage in citizenship through digita... interact through digital technologies manage digital identity share through digital technologies use online conventions of netiquette
- > problem-solving with digital tools
- > digital content creation









## interact through digital technologies

Description

Interact through a variety of digital technologies and understand appropriate digital communication means for a given context.

Alternative label

communicate in digital environments

use e-mail software and services

using online communication tools

use online communication tools

communicate on-line

apply online communication tools

interact through ICT

make use of online communication tools

utilise online communication tools

# Linking learning outcomes of qualifications to ESCO skills



### The potential of linking qualifications to skills

Enrich information on qualifications by linking their learning outcomes to skills

Employers grasp qualifications' labour market value in a cross-border context

Individuals improve chances in labour market through better matching





Linking of qualifications pillar to skills pillar



### Pilot for linking qualifications to skills

Test with candidate Member States in national qualifications databases

Examine limited number of diverse qualifications in different national databases

Different description styles in min 3 languages

National Qualification Frameworks referenced to EQF

VET and Higher Education qualifications

**Candidate Member States** 



### **Timetable**

1 April 2019	Deadline for expression of interest in piloting the linking of learning outcomes to ESCO skills
April – September 2019	Testing period
October 2019	Report on the results of testing
November/December 2019	Discussion of the testing results in the EQF AG – ESCO MSWG
As from January 2020	Possible launch of further development of ESCO to allow linking of learning outcomes to ESCO skills



ESCO uptake

#### Recruiting

Matching people to jobs & trainings

Advertising job vacancies

Career planning

Documenting & mapping skills & qualifications

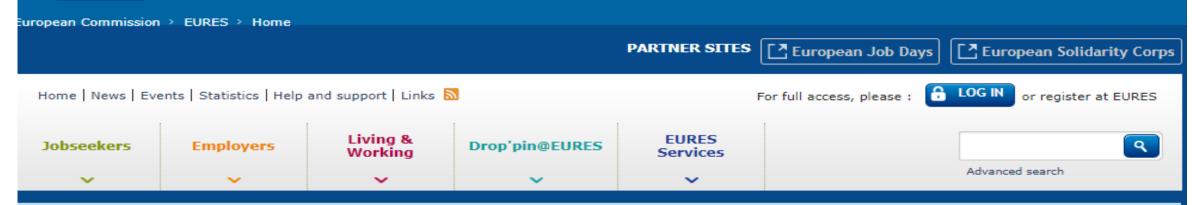
Analysing the labour market





#### **EURES**

#### The European Job Mobility Portal





We are committed to protecting your personal data and have updated the data protection statement and the specific conditions for **X** Skip jobseekers and employers. You can access it **here**.

EURES. The European Jobs Network.

# Explore your European potential.

- 1,641,966 job vacancies
- 402,938 CVs
- 12,546 Employers
- 1,005 EURES Advisers

**HOW CAN WE HELP YOU?** 



#### I'm an Employer.

FIND CANDIDATES

Create EURES accou	nt
Advertise a job	
Search for Skills Pass	sports
Publish a youth oppo	ortunity
Contact EURES Advis	ser



# Connecting Employers and Jobseekers





Search for your next job















#### SKILL MATCH MAKER

Openskimr is a life-long

companion which guides talents

through their career in the STEM

area.

Openskimr is a platform for an

#### EXPERT AND TALENT COMMUNITY

independent expert and talent community. People from the research consortium and the

#### MATCHING ALGORITHMS

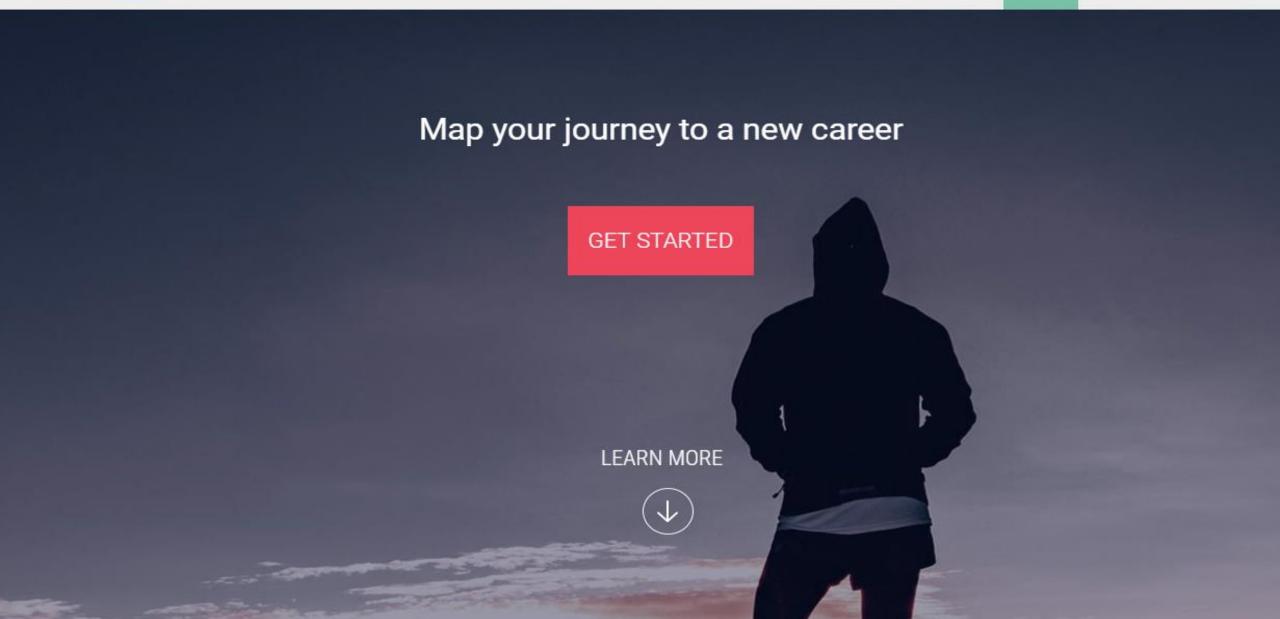
The Openskimr team develops a set of algorithms which involve match-making and recommendations of jobs and

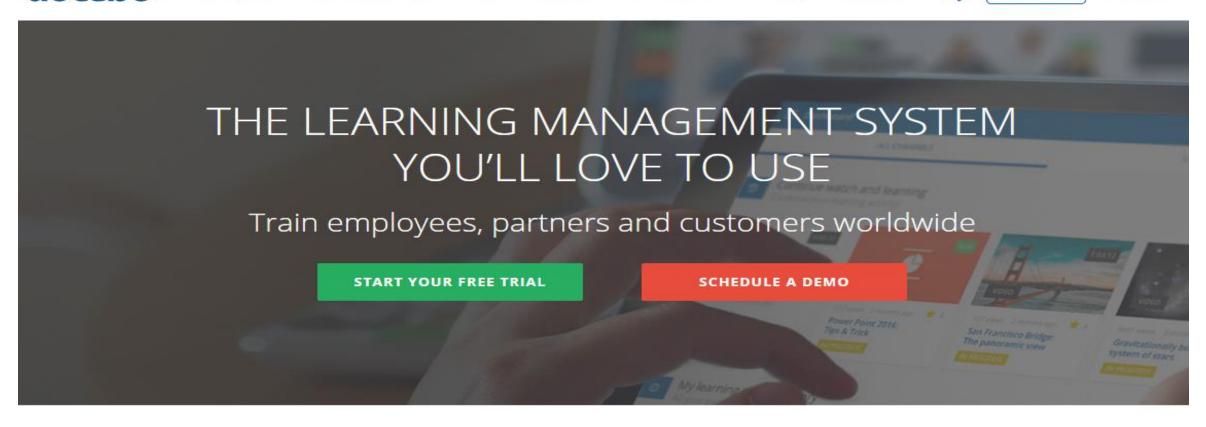
#### **EUROPEAN CLASSIFICATION** SYSTEM ESCO

Openskimr is built on the latest version of the European classification system ESCO (European Skills, Competences,

About











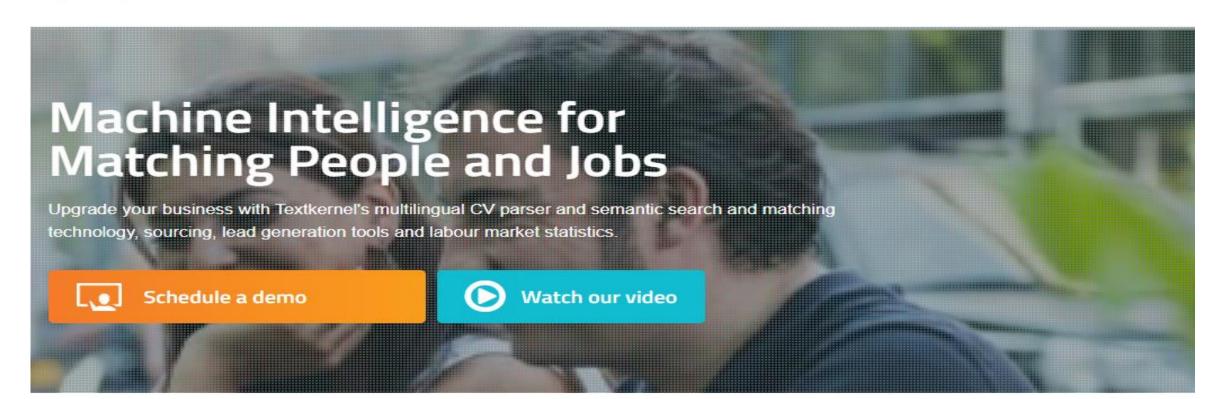








Docebo is the only learning platform that combines formal, social and experiential learning with skills management to maximize learner performance



A selection of Textkernel's customers and partners

View more >











# Making the same list as Google, Rocket Internet and Tesla – that's really something.

milch & zucker was recently listed as one of the most innovative companies in Germany by brand eins magazine.

Read more





#### **Talent Acquisition**

#### COMMUNICATION MEETS SYSTEM

Modern organizations need integrated strategies for attracting, hiring, and retaining top candidates. In other words, systematized sourcing concepts – from employer branding, ingenious marketing strategies and concepts, to the integration of active sourcing.



#### **Talent Management**

#### SYSTEM MEETS INDIVIDUALLY

In addition to the right strategy, technology is needed to reach and recruit the right candidates, and to accompany them into the organisation itself.

Systematic, structured, effective, but still customised to the organisation and its needs.



### **Current Europass (2004)**



**Citizens communicate skills and qualifications** 

**Employers understand workers' skills and qualifications** 

Education and training authorities communicate learning achievements





**Europass CV** 

europass

Europass Curriculum Vitae

E-mail(s)

Nationality

Gender

Dates

Dates

Date of birth

BIII C.

name.programmer@dor

Programmer, SW Develo

1 Jan 00 - 1 Aug 10

Engineer/, Microsoft .NE

Aditus Recruitment

Recruitment services

1 Jan 97 - 31 Dec 99

technologies)

Internet services

Programmer (Software E

Acesta-Job info - Job Se

11 January 1975

Personal information First name(s) / Surname(s)

Desired employment /

Occupational field

Occupation or position held Main activities and responsibilities

Type of business or sector

Occupation or position held

Type of business or sector

Main activities and responsibilities

Name and address of employer

Education and training

Title of qualification awarded

Name and type of organisation

providing education and training

Principal subjects / occupational skills

Name and address of employer

Work experience

- **Diploma Supplement**
- **Certificate Supplement**

Summer(s)

Kavasa str. 52.

GR-54248 Thessalpells

21 | 05 | 1912

Name of the issuing organisation

Vocational College of Greenfield

European Mobility number

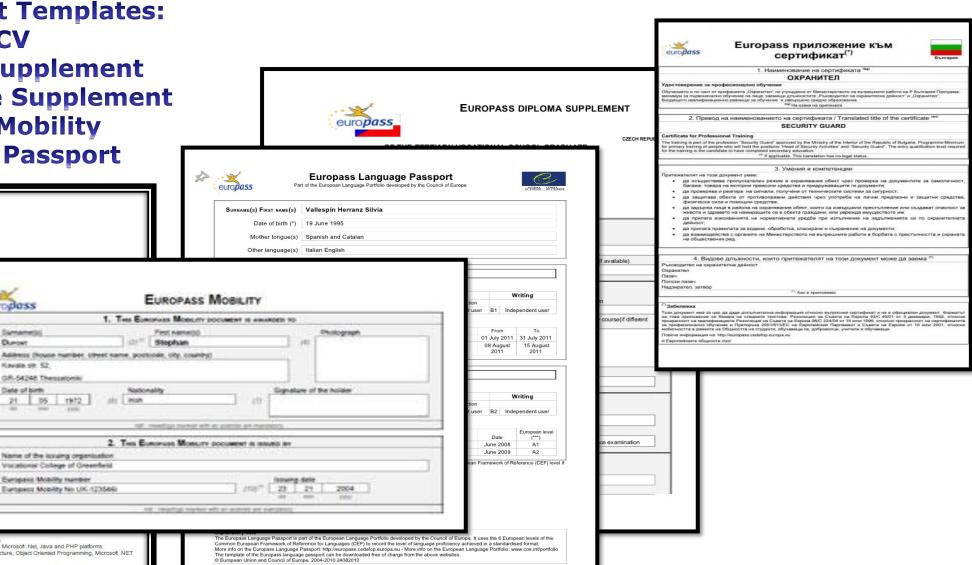
THY European Mobility No UK-123546

TIT! Duront

Thesis theme: Multi platform Programming and Microsoft .Net, Java and PHP platforms Final examination subjects: Information Architecture, Object Oriented Programming, Microsoft .NET

University of Information Technology in Seattle (Faculty of Software Development and Programming)

- **Europass Mobility**
- **Language Passport**



### **New Europass**

Open to current digital evolutions and media

Dynamic in order to move from documentation to provision of wider services

Interoperable with any system through open standards

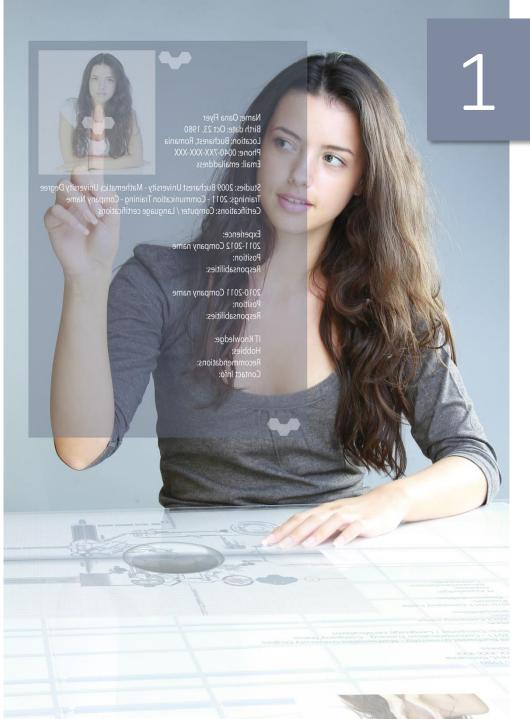
Show opportunities no matter the choice of system



### **New Europass Decision**

Adopted by the European Parliament on 15 March 2018 and by the Council of the European Union on 12 April 2018





# A digital e-portfolio for all skills & qualifications

- Manage your skills and qualifications online
- Include documents and media, such as open badges, digital qualifications or video CVs
- Create CVs and applications
- Transfer your e-portfolio to/from other services, e.g.
   Social Media or job boards





# Access more job & learning opportunities in Europe

- Find the best learning opportunities for you on the Europass portal
- Find the best job for you on EURES
- Find jobs and learning offers by other providers, such as job boards, Social Media, online learning platforms
- Apply with 1 click at partner websites

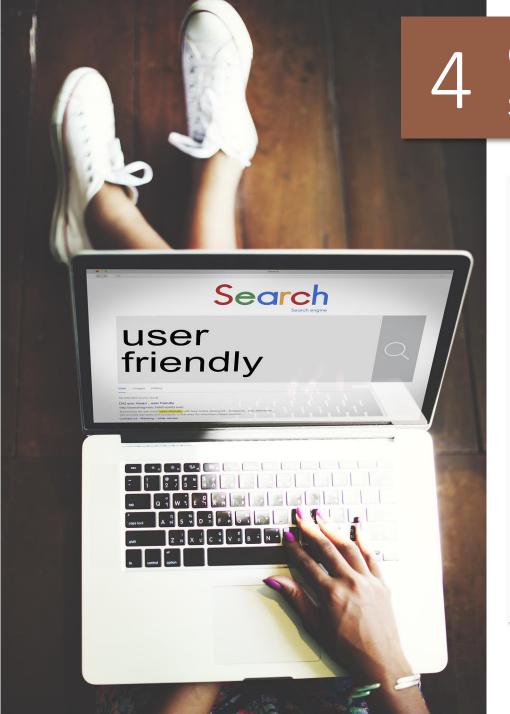




## 3 Digital qualifications

- A technical framework to issue digital qualifications to people
- Fraud-proof with digital signature. Can include information on the qualification, the organisation awarding the qualification and the qualification system
- Machine-readable for online applications, job matching, etc.





# One EU portal on career, skills & qualifications

- Bring together the various
   European websites related to
   skills and qualification
- Easy access to everything you need in order to plan your skills development and your career in Europe



# High quality information on skills demand & supply

- Information on skills demand, skills supply and skills gaps help people to plan their training and career
- High quality results from the big data analysis of job vacancies







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