

# Getting data on skills in real time

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Cedefop BBS

'Labour market and skills information systems for VET policy'

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**CEDEFOP**

European Centre for the Development  
of Vocational Training

# Why explore online job vacancies?

- Detailed or in-depth data on skill demands by employers often lacks in countries
- Conventional methods are expensive, suffer from time lags, focus on specific types of skills
- Advances in technology (web crawling and big data analysis)
- Expansion of online job market
- Online vacancies include occupations at all levels

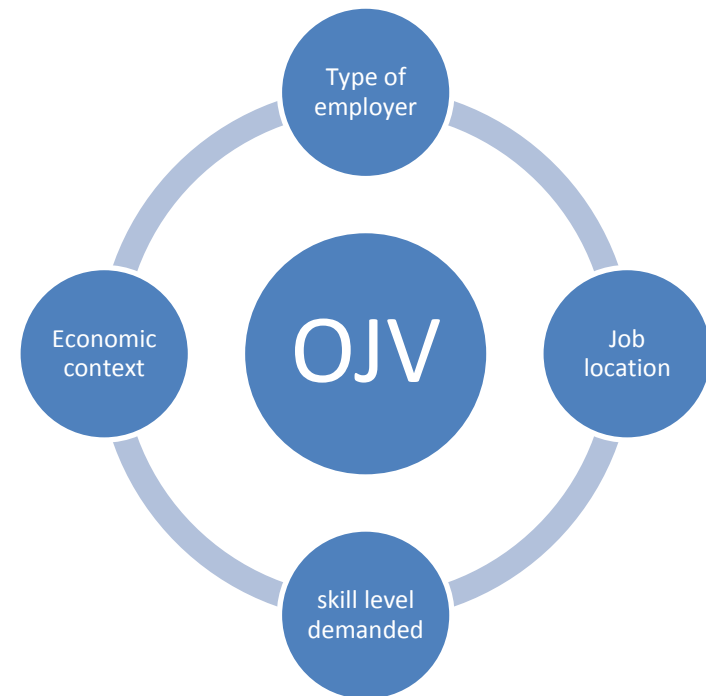
# Scraping online job vacancies

## Key questions

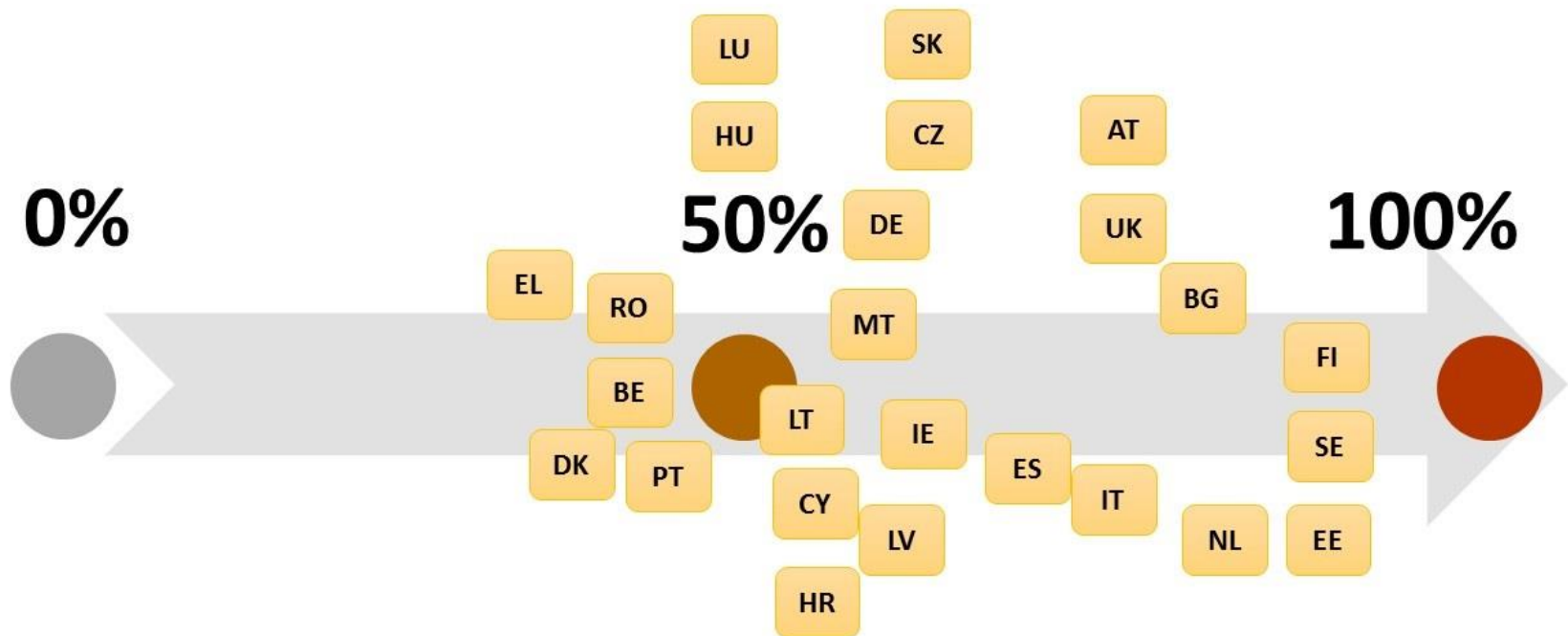
- What is the coverage of the online labour market?
- How are employers using skills in vacancies?
- Which web portals to focus on?

## How?

- Get primary vacancies
- Classify occupations
- Classify skills + other requirements



# Job vacancies published online, 2017 %, assessment by country experts



Source: Cedefop expert workshop in Milan, 2017

# Extraction and classification

## Junior Software Developer

As Junior Software Developer, you will develop excellent software for use in field mapping, data collection, sensor networks, street navigation, and more. You will collaborate with other programmers and developers to autonomously design and implement high-quality web-based applications, restful API's, and third party integration.

We're looking for a passionate, committed developer that is able to solve and articulate complex problems with application design, development and user experiences. The position is based in our offices in Harwell, United Kingdom.



2512 – Software Developer

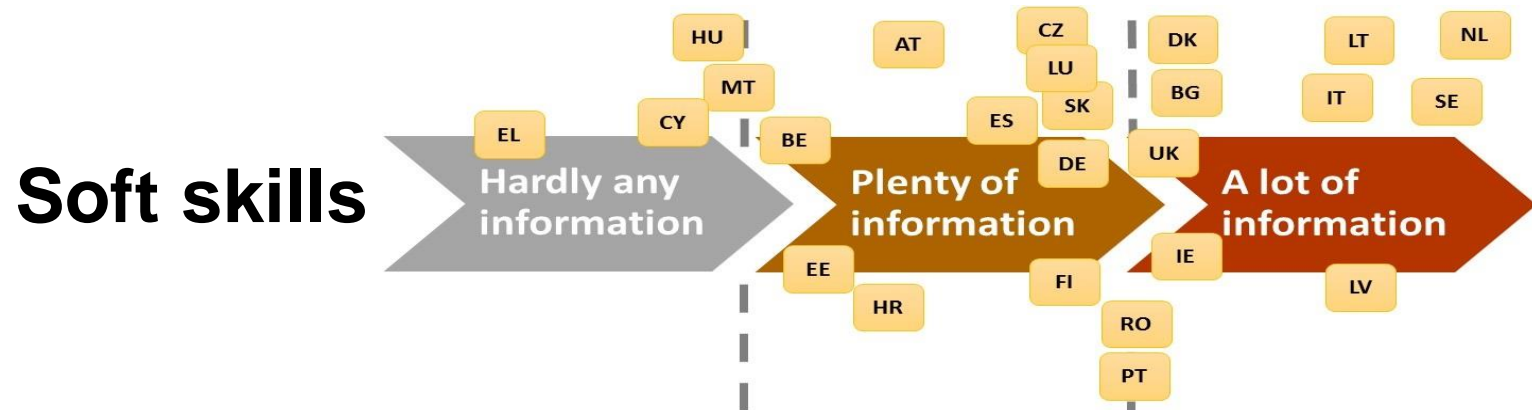
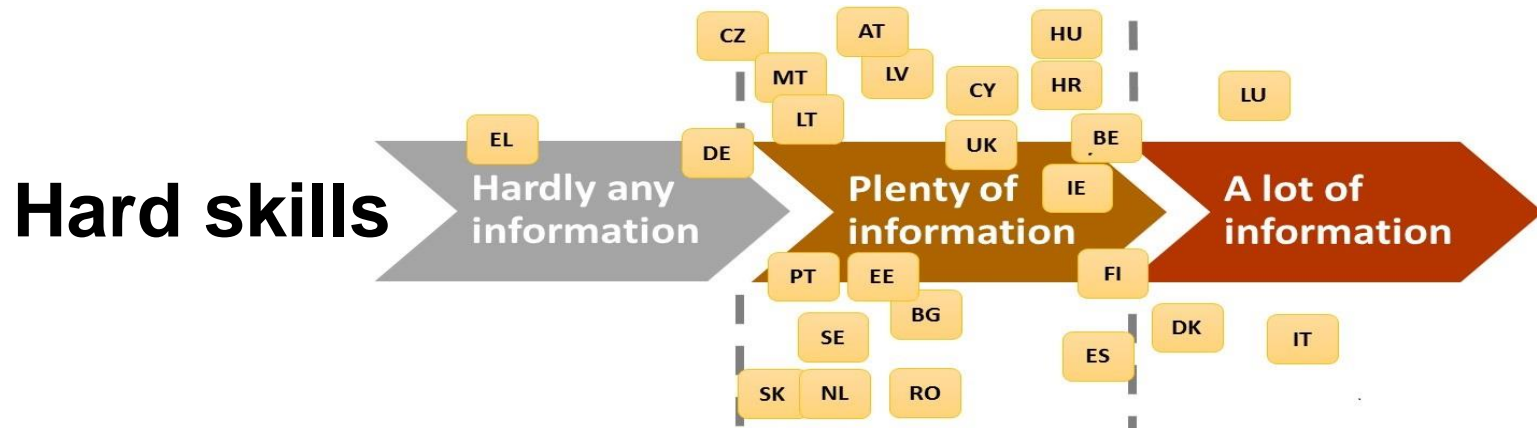
Skills: develop software, implement web based applications, problem solving, develop user experiences

Harwell, UK

...

# Skills in Online Job Vacancies, 2017

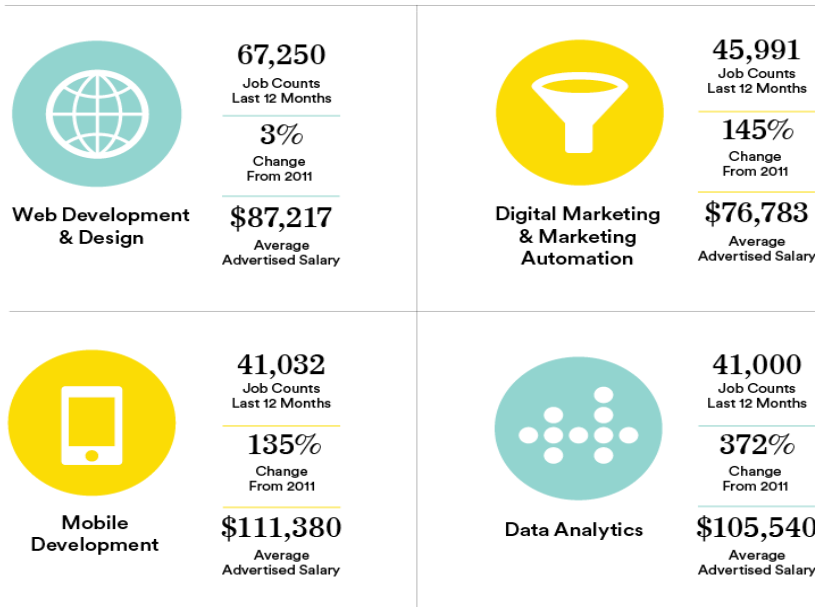
## assessment by country experts



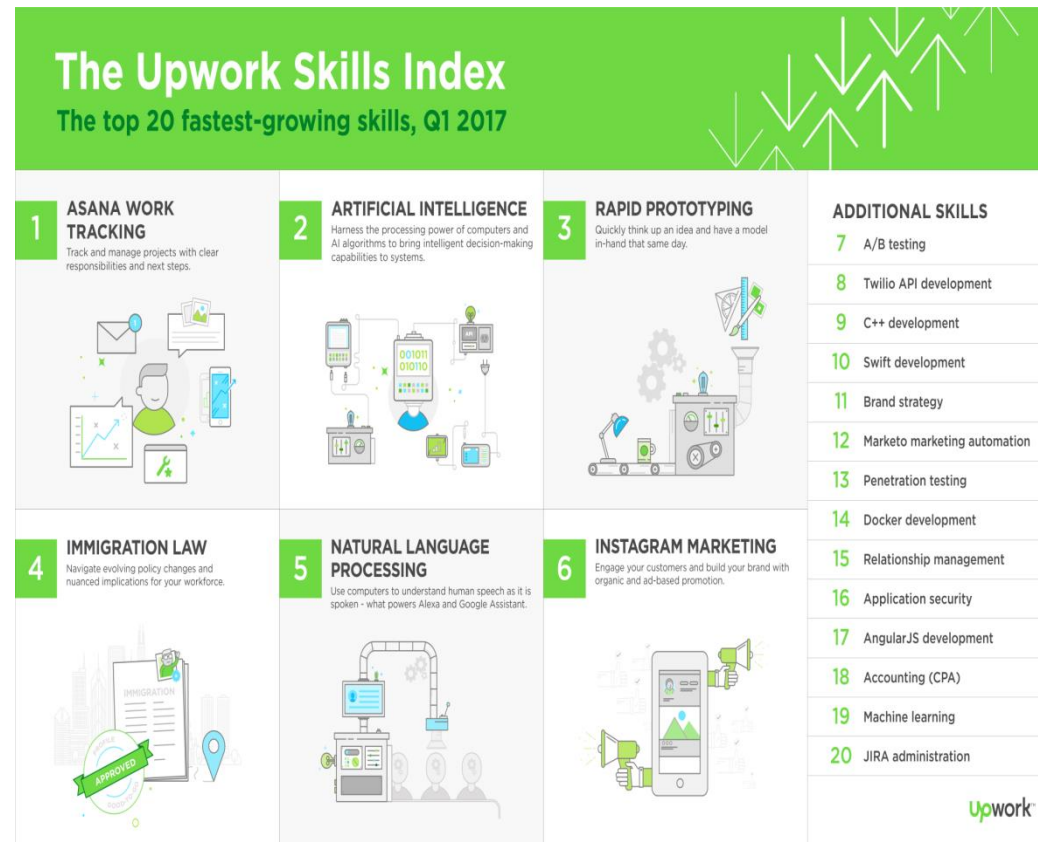
Source: Cedefop expert workshop in Milan, 2017

# Applications of real-time LMI

## Skills in demand for freelancers



**Signalling potential of hybrid jobs**





# Applications of real-time LMI (2)

## Better understanding occupations

### Heavy truck and lorry drivers (ISCO 8332)

#### Cluster 1

- Driving
- German language
- Cars
- Stamina
- Staff development

#### Cluster 2

- Driving
- German language
- Delivery lorry driving
- Professional appearance
- Project management

#### Cluster 3

- Delivery lorry driving
- Attitudes
- Driving
- Accounting responsibility
- language

#### Cluster 4

- Driving
- Stamina
- Working with others
- Fork-lift driving
- Lorry (un)loading

Source: Analysis based on pilot RLMI project

# Real time LMI does not provide all the answers

Traditional LMI	RLMI
<b>For strategic decisions, with complete workforce in view</b>	For a short-term tactical view, about a segment of the workforce
<b>Thorough and comprehensive but not highly disaggregated</b>  <b>“What has happened”</b>	Limited to online job market but detailed  Leading indicators of future job growth and emerging skills  <b>“What might be happening”</b>
<b>Structural data on industries and occupations</b>	In demand skills and credentials
<b>Difficult and expensive to collect</b>	Cheap after initial development efforts
<b>Inflexible, sometimes inconsistent across sources</b>	No time lag, allows for flexible responses from LM actors but biased (filtering function, posting ≠ hiring)



# Thank you

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