



How LinkedIn's Economic Graph helps to create jobs and growth

# Cedefop & Estonian Presidency of Council of the EU

## Seminar on VET and Future of work

8 December  
Brussels



**Séin Ó Muineacháin**

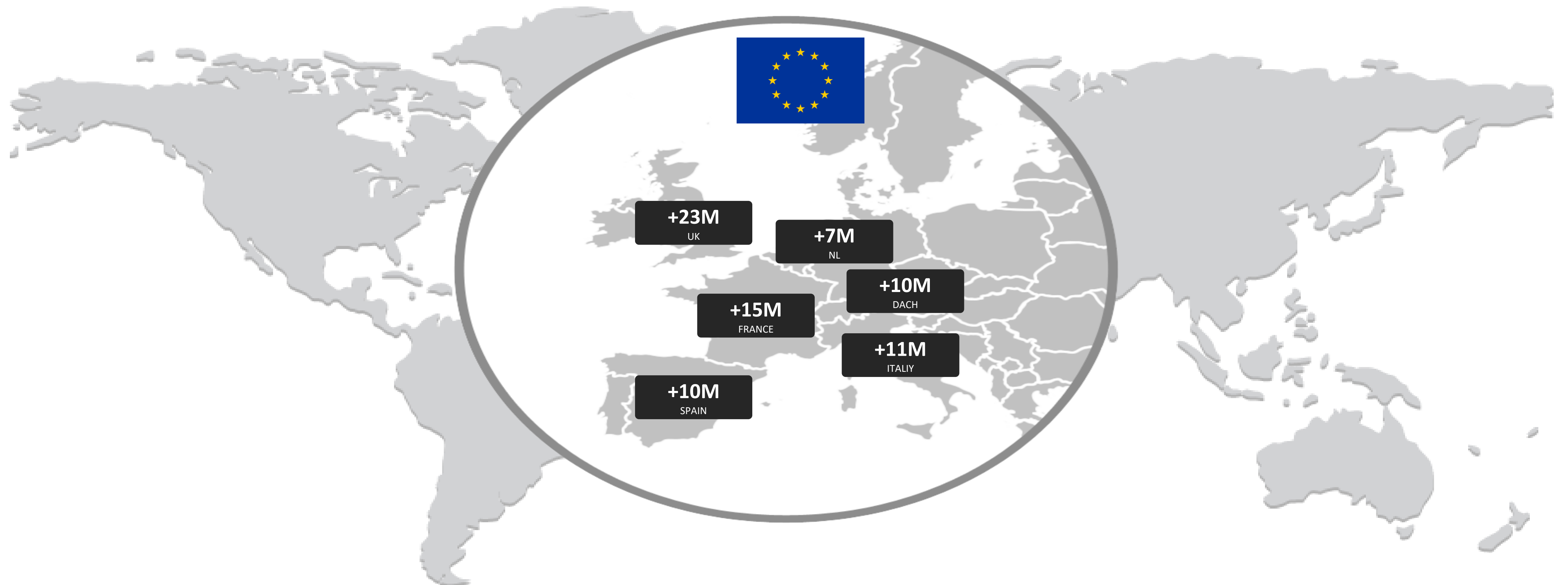
Economic Graph Analytics Team Lead for  
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**Mirek Pospisil**

EU Public Policy  
Government Affairs Manager

# The World's Largest Professional Network



**+530M**  
Members

**+2**  
New members per second

**+21B**  
sessions in 2017



# The Economic Graph

Creating a digital map of the global economy

**530M+**  
Members



**18M**  
Companies



**11M**  
Jobs



**50K**  
Skills



**29K**  
Schools





# Member profiles make up a rich data set that LinkedIn aggregates to understand a region's labour market

The image shows a LinkedIn profile for Neil Dueni, a User Experience Designer. The profile is highlighted with three blue boxes, each containing a section of the profile:

- Experience:**
  - User Experience Designer** at LinkedIn (April 2014 – Present (9 months) | San Francisco Bay Area). Description: Taking care of user experience design works for both of interaction and visual projects in the team.
  - User Interface Designer** at GE (November 2012 – March 2014 (1 year 5 months) | Louisville, Kentucky Area). Description: Working on diverse interface design projects in GE appliances and lighting group.
- Education:**
  - Parsons School of Design** (Master, Design and Technology) (2010 – 2012). Description: Research on Digital Product Design, study in programming and motion graphics, while freelancing for diverse projects and startups. 2 honors and awards.
  - Pennsylvania State University** (Bachelor's Degree in Design) (2007 – 2010). Description: Study in Graphic Design program and the skills in Branding Design, Printing, User Design, User Centered Design, and so on.
- Skills:**
  - Top Skills:**
    - User Interface Design (22)
    - User Experience (20)
    - Graphic Design (9)
    - User Interface (7)
    - User Experience Design (6)
    - Adobe Creative Suite (4)

## Jobs

Members indicate their job history in the experience section of their profile. When a new position is added with a different location or employer, LinkedIn uses these signals to uncover trends. Information is always summarized to protect individual member privacy.

## Education

Members indicate their academic achievements in the education section of their profile, such as their higher education organization and degree type.

## Skills

Members indicate their expertise within the skills section of their profile. LinkedIn clusters the tens of thousands of individual skills that members choose to display on their profile into categories for analysis.

## Technology

Software Engineering Management

Software Modeling and Process Design

Web Programming

# Key topics for policymakers and education institutions

Workforce



Companies



Jobs



Skills



Education



4<sup>th</sup> Industrial Revolution

Automation & Artificial Intelligence

Education and Upskilling

Youth unemployment

# The Economic Graph – Use cases

## Partnerships with policymakers around the continent

We work with policymakers to answer questions such as:

- What industries do most people work in?
- What jobs do they do?
- What qualifications do they have?
- Where did they receive their qualifications from?
- What skills do they have?
- What jobs are open?
- Where are people coming from?
- Where are people going?
- What sort of networks do people have?



# Brussels region



**726K**  
Members



**56K**  
Companies  
represented



**11K**  
Jobs  
open



**17K**  
Standardised  
Skills



**6.1K**  
Schools







# Brussels region members with these skills are very likely to have started a new position in the past 12 months.

**25%** of members with Perl/Python/Ruby have started a new position last year

1	Perl/Python/Ruby	25%
2	Mobile Development	24%
3	SEO/SEM Marketing	23%
4	User Interface	23%
5	Statistical Analysis and Data Mining	22%
6	Social Media Marketing	22%
7	Economics	21%
8	Mathematics	21%
9	C/C++	21%
10	Marketing Demand Generation	21%

# London's Tech Talent

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There is a consistent profile in the type of tech skills held by members who have graduated from London-based third level institutions over the past three years

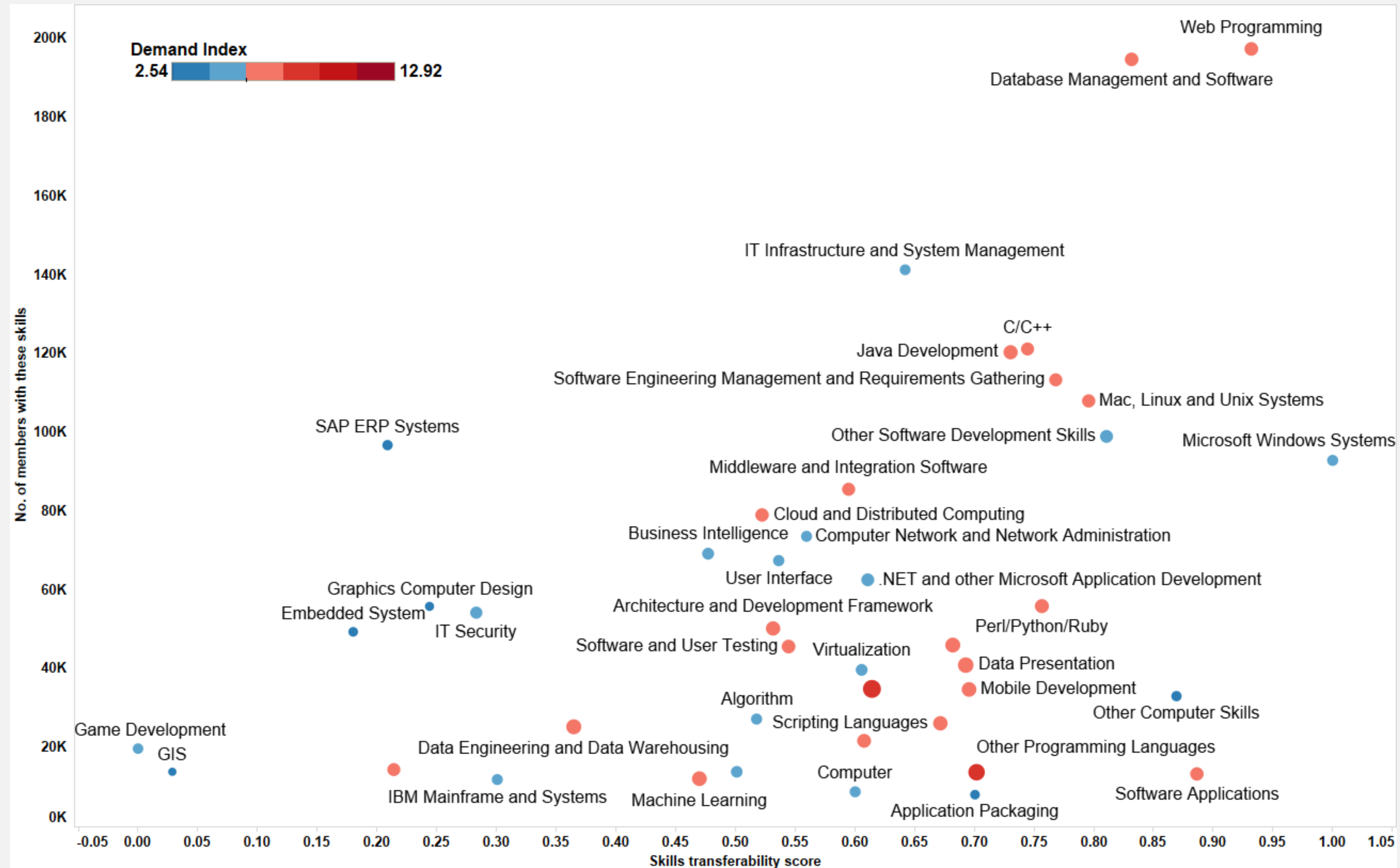
2014 graduates		2015 graduates		2016 graduates	
1	Web Programming	1	Web Programming	1	Web Programming
2	Database Management and Software	2	Database Management and Software	2	Database Management and Software
3	Microsoft Windows Systems	3	Microsoft Windows Systems	3	C/C++
4	C/C++	4	C/C++	4	Microsoft Windows Systems
5	Graphics Computer Design	5	Graphics Computer Design	5	Graphics Computer Design
6	Java Development	6	Java Development	6	Java Development
7	User Interface	7	User Interface	7	User Interface
8	IT Infrastructure and System Management	8	IT Infrastructure and System Management	8	IT Infrastructure and System Management
9	Computer Network and Network Administration	9	Perl/Python/Ruby	9	Perl/Python/Ruby
10	Software Engineering Management and Requirements Gathering	10	Computer Network and Network Administration	10	Computer Network and Network Administration

# France: Skills transferability

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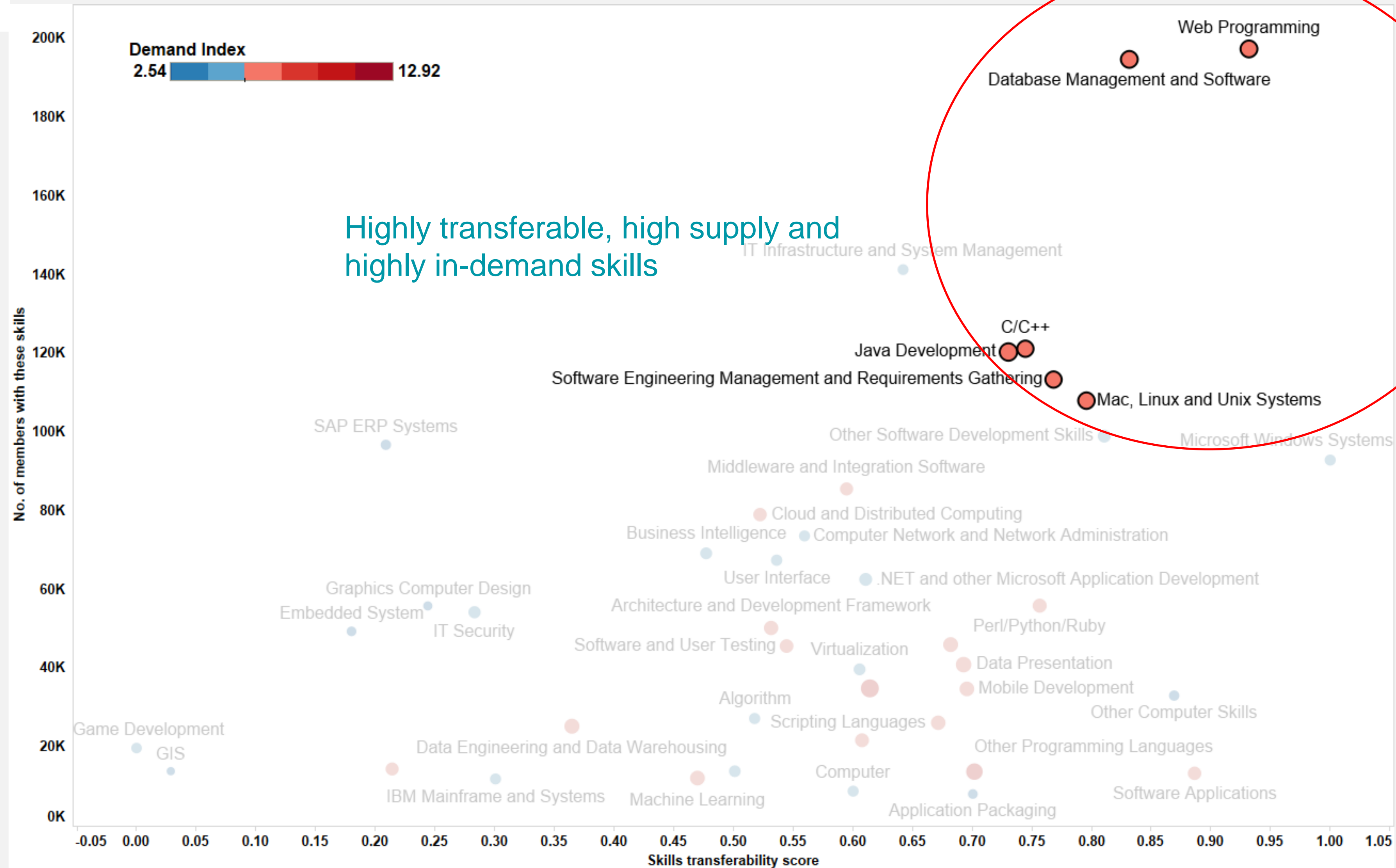


# France tech skills transferability map

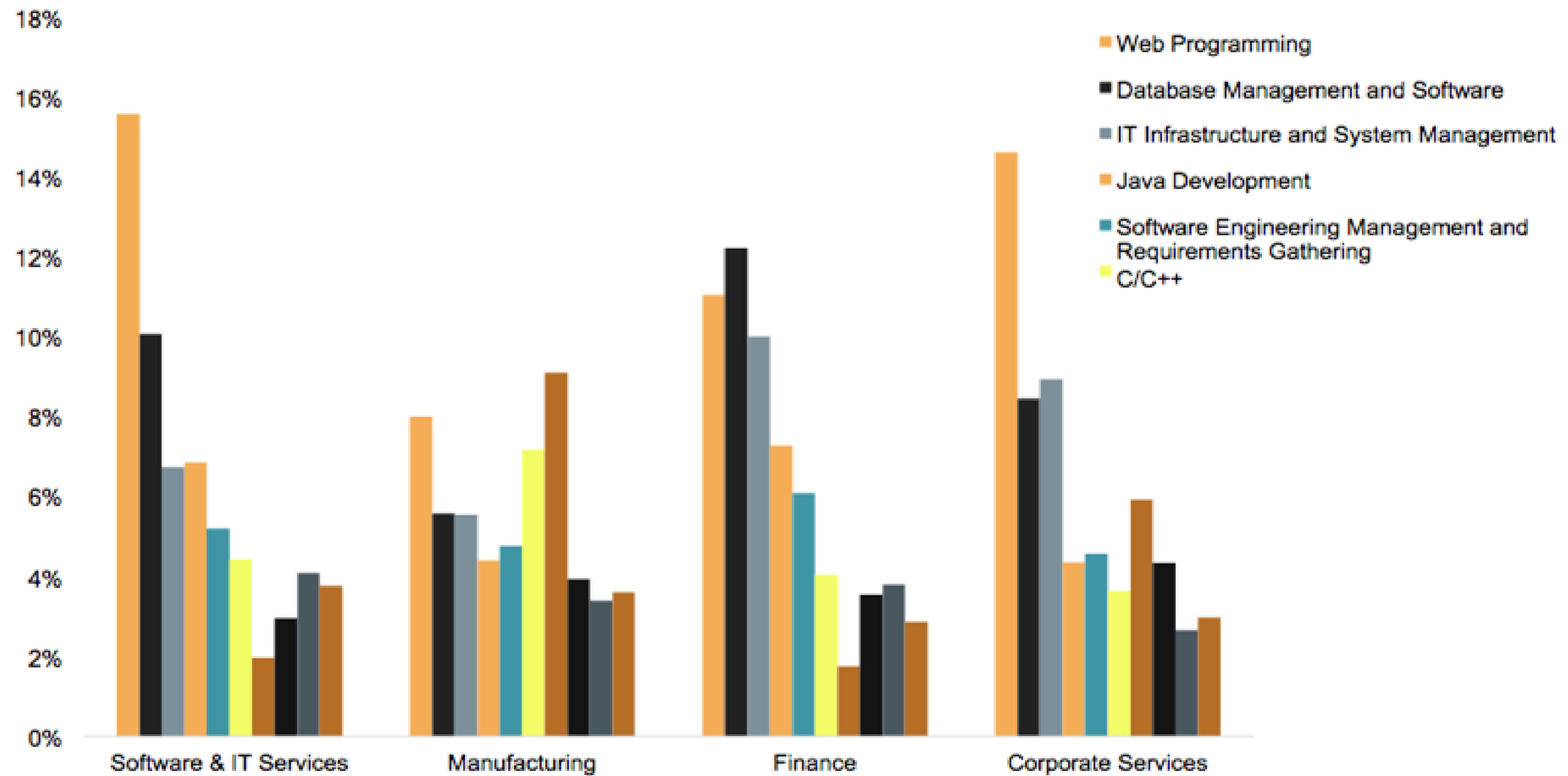




# Web programming and database management are relatively transferable and are highly in-demand by recruiters



# The prevalence of tech skills varies across different sectors



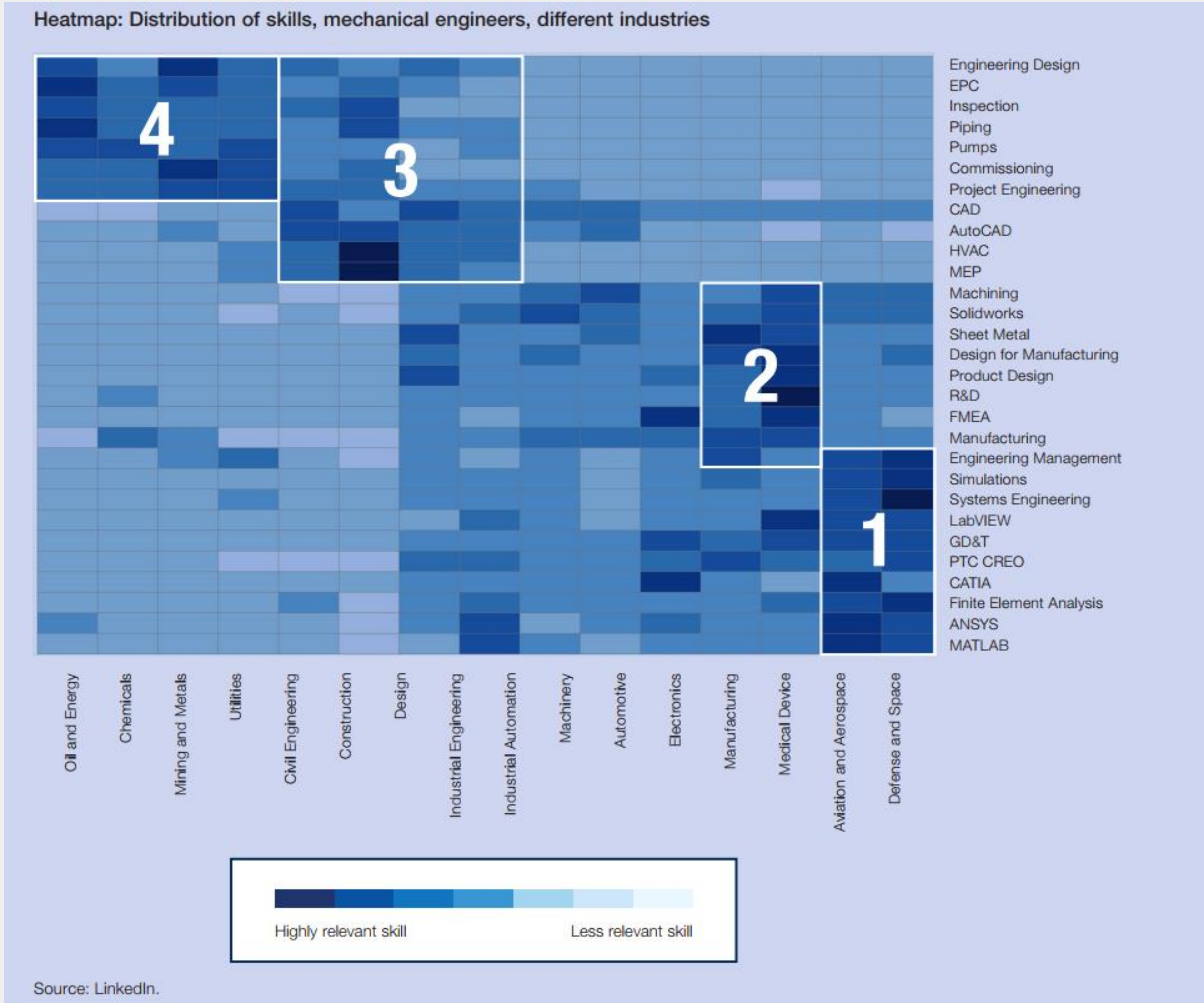


# Global





LinkedIn data reveals that **understanding human capital at the actual skills level** is crucial because formal qualifications and titles alone are often insufficiently meaningful



# **LINKEDIN'S 2017 U.S. EMERGING JOBS REPORT**





LINKEDIN'S 2017  
U.S. EMERGING JOBS REPORT



Top emerging jobs in the U.S.

1	Machine Learning Engineer
2	Data scientist
3	Sales development representative
4	Customer success manager
5	Big data developer
6	Full stack engineer
7	Unity developer
8	Director of Data Science
9	Brand partner
10	Full stack developer



Top skills for emerging jobs in the U.S.	
1	Management
2	Sales
3	Communication
4	Marketing
5	Start-ups
6	Python
7	Software development
8	Analytics
9	Cloud computing
10	Retail

For machine learning roles...	
1	Machine learning
2	Research
3	Algorithms
4	Software
5	Deep learning
For big data developer roles...	
1	Big data
2	Hadoop
3	Java
4	[Apache] Hiver
5	Start-ups



# THE ECONOMIC GRAPH

Learn more at  
[economicgraph.linkedin.com](https://economicgraph.linkedin.com)