2nd Employment Survey for European Chemists (ESEC2)

- Chemists ready for Horizon Europe?

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Highly-Skilled Jobs
Mobility in the Workforce
Satisfaction

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ESEC2 Responses

2754 responses in total
1734 graduated with last 15 years (63%)

Age distribution

Not employed
EU 07/2017: 7.6%
ESEC2 03/2017: 3.7%
ESEC1 03/2013: 2.7%
Share of Females

Share of females in chemistry across EU: 41%

G11 Countries:

- Germany
- Greece
- Spain
- The Netherlands
- Belgium
- Italy
- Portugal
- Switzerland
- United Kingdom
- Finland
- Czech Republic

Females

- ESEC2
- ESEC1

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Where the jobs are

- Industry, manufacturing: 32%
- Industry, non-manufacturing: 10%
- Higher education: 25%
- Research institution: 18%
- Secondary school: 2%
- Other governmental organisation: 2%
- Non-governmental organisation: 2%
- Vocational school: 2%
- Self-employed: 2%
- Publishing company: 0%
Where the jobs are: Research & Innovation

- Industry, manufacturing: 32%
- Industry, non-manufacturing: 10%
- Higher education: 25%
- Research institution: 18%
- Secondary school: 39% of all industry employees: R&D is dominating work function
- Self-employed: 2%
- Publishing company: 0%
- Non-governmental organisation
- Other government/public service at national level
- Vocational school

Chemistry is dominated by R&D

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Chemistry is Prepared for New Jobs

Horizon Europe will:

Create up to 320,000 new highly-skilled jobs by 2040

Fund ground-breaking research and innovation

Ref: https://www.youtube.com/watch?v=g8BQNnX6_kY&feature=youtu.be
Chemists Working Abroad

G11 Countries:

- Germany: 24%
- Greece: 8%
- Spain: 16%
- The Netherlands: 24%
- Belgium: 16%
- Italy: 8%
- Portugal: 16%
- Switzerland: 24%
- United Kingdom: 8%
- Finland: 16%
- Czech Republic: 0%

Develop their knowledge and skills through mobility

Ref: https://www.youtube.com/watch?v=g8BQNNnX6_kY&feature=youtu.be
Status of Foreign Chemists

- I am a citizen of another EU Country (60%)
- I have a permanent residence permit (40%)
- I have a fixed-term residence permit (20%)
- Citizenship by naturalization (10%)
- Other (0%)

Ref: https://www.youtube.com/watch?v=g8BQNnX6_kY&feature=youtu.be
... postdocs “have all the academic science skills you don’t need, and none of the organizational skills that you do”.

Fact or preconception?
Satisfaction: My Job ...

It is a great time to be a chemist!
Satisfaction: My Job …

- is related to my field: 45% strongly agree, 30% agree, 15% undecided, 0% disagree
- is commensurate with my training: 45% strongly agree, 30% agree, 15% undecided, 0% disagree
- is challenging: 45% strongly agree, 30% agree, 15% undecided, 0% disagree
- fits to my expectations: 45% strongly agree, 30% agree, 15% undecided, 0% disagree
Information about Career Options

Current postdocs in chemistry:

- University faculty (emphasis on research)
- University faculty (emphasis on teaching)
- Government or research institute
- Startup firm (emphasis on research)
- Established firm (emphasis on research)
- Non-research careers

够信息
- Could use more / severe lack of information

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Quality Labels in Chemistry Education
Chemistry and Horizon Europe

Chem/plastic/pharma industries provide ~3 mio jobs in EU28, mostly R&D


Chemists are mobile, highly satisfied with their jobs, low unemployment

Curricula of high quality, career planning should be improved further

Global view: Transatlantic survey in 2020