



International mapping of training programmes on raw materials and resources (Atlases)

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Task 1.1 Scoping (IGME, UPM, EFG, MUL, CCOP, AGI, YES)

- Define the functional requirements that are necessary to build up the database of the existing training
- Definition of a coherent system of skills → production of a skills catalogue (D1.1)

Task 1.2 Mapping (MUL, all participants and EGS third parties)

- Identification and collection of information on existing technical and vocational training courses
- Desk research, online research, surveys and interviews with program leaders
- Comprehensive collection of all existing training programs, including a judgement on the strengths and weaknesses of each one, thus setting up a knowledge base,
- Populate a searchable wiki database interlinked with a geographic information system

Framework - Deliverables

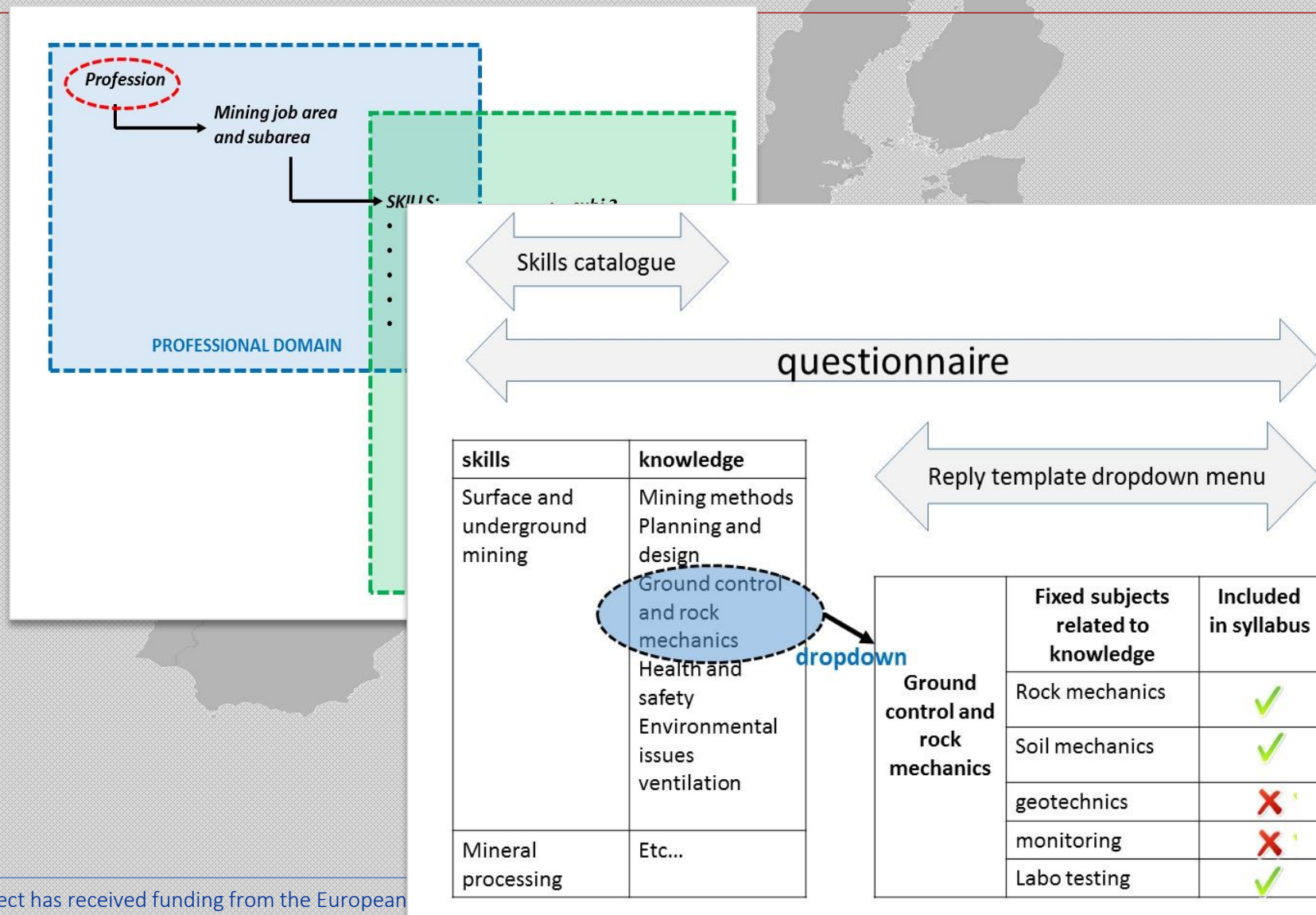
Duration: M1-M12

Task1.1 Scoping (M1-M5)

Task1.2 Mapping (M1-M12)

Deliverable	Title	Lead	Type	Level	Date
D1.1	Skills catalogue for the raw materials sector	IGME	Report	Public	M5
D1.2	Database process manual	MUL	Report	Public	M12
D1.3	Global repository of training programs and networks on raw materials in the EU and advanced mining countries	MUL	Website, patent fillings, etc.	Public	M12





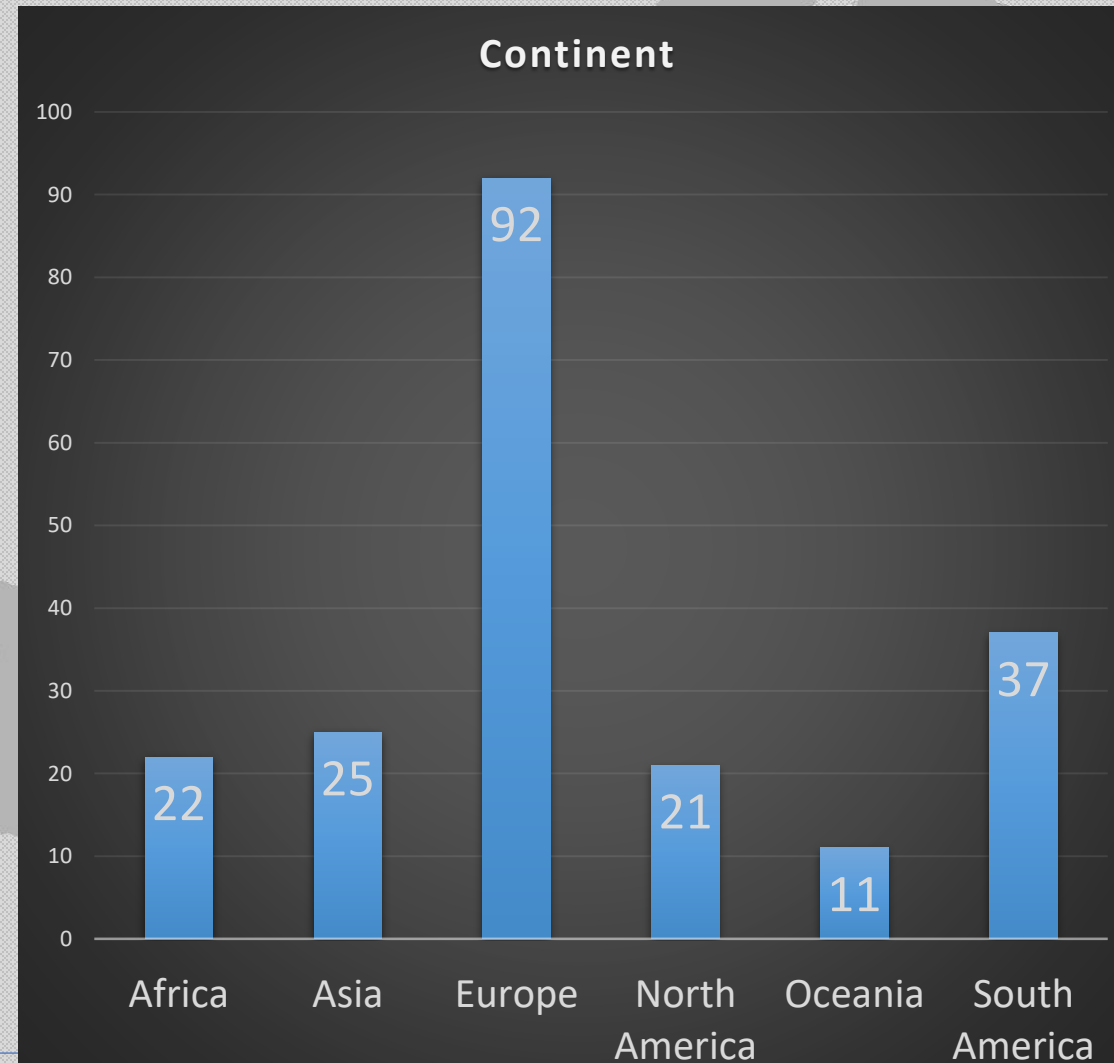
The questionnaire

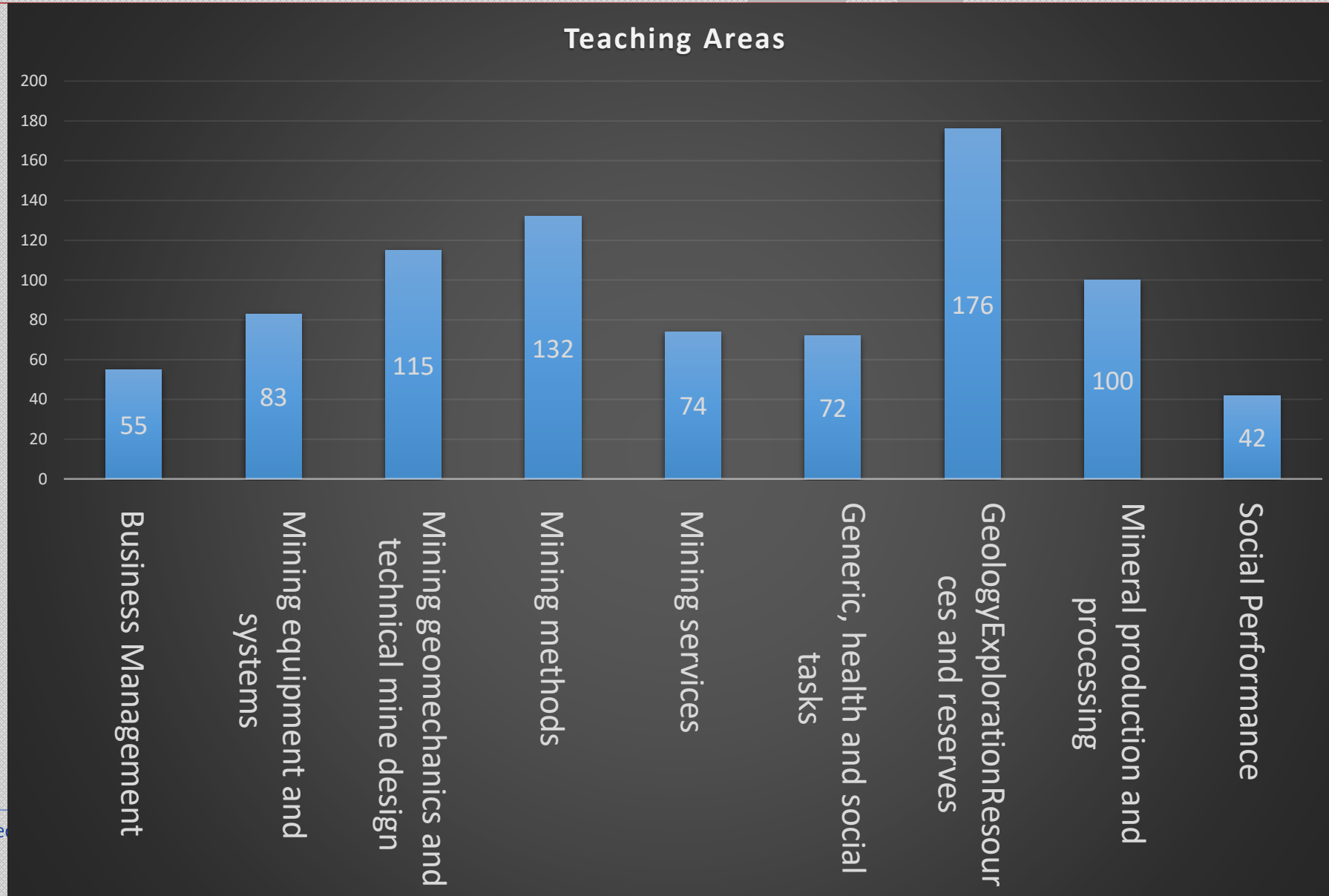
INTERMIN D 1.1 Skills catalogue

INTERMIN

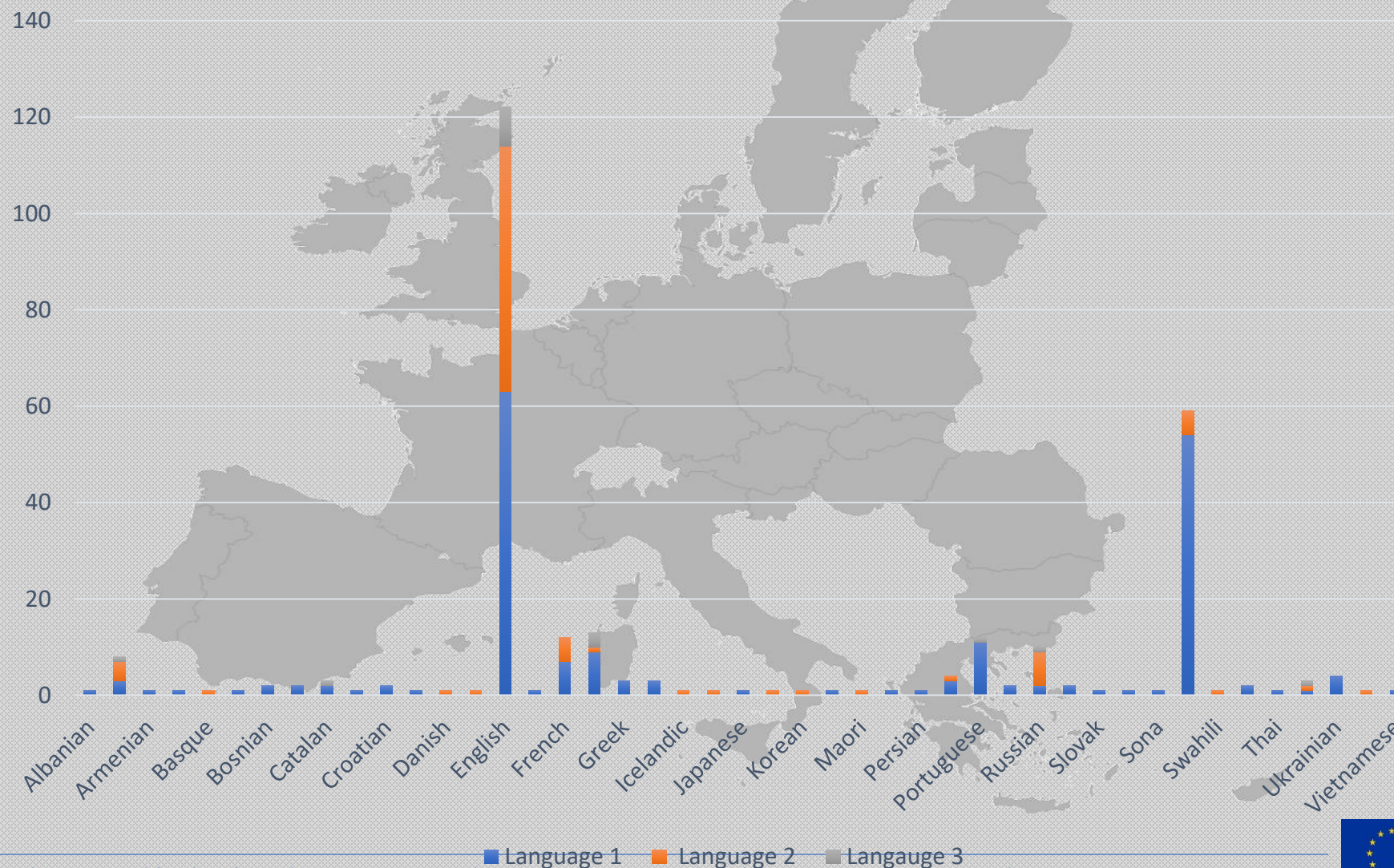


MINING JOB AREA	MINING JOB SUB - AREA	SKILLS /KNOWLEDGE OUTCOMES
1.- Business Management	1.1.Mining in a global environment	1.1.1. Analyses the market to predict future demand/supply trends. 1.1.2. Understands mine economics and the minerals market and their influence on mining systems 1.1.3. Understands economics and mining geology 1.1.4. Understands the impacts of commodity price fluctuations 1.1.5. Understands the trade-off between risk and value in mining decisions 1.1.6. Facilitates the implementation of environmental, engineering, mining and social best practices
	1.2. Legal and regulatory requirements	1.2.1. Understands and applies the 'license to operate' philosophy' 1.2.2. Understands and adheres to mining and related legislation and regulations 1.2.3. Understands and adheres to other relevant legislation and regulations ⁱ
	1.3. Organisational structures	1.3.1. Understands the organisational, hierarchy and information flows for typical mining businesses and operations
	1.4. Financial operations	1.4.1. Understands the basics of investment banking and its relationship to the resources sector 1.4.2. Understands business development principles applicable to the mining industry 1.4.3. Interrogates and interprets financial statements 1.4.4. Creates comprehensive financial models 1.4.5. Uses financial models and Analyses financial data 1.4.6. Forecasts cash flows
	1.5. Production costs	1.5.1. Identifies the significant cost areas related to the operation 1.5.2. Delivers cost/benefit analyses 1.5.3. Generates CAPEX and OPEX from first principles 1.5.4. Performs trade-off studies by analysing production equipment economics 1.5.5. Identifies the impact their role has on the value chain of the business
		1.6.1. Completes first-principles cost modelling





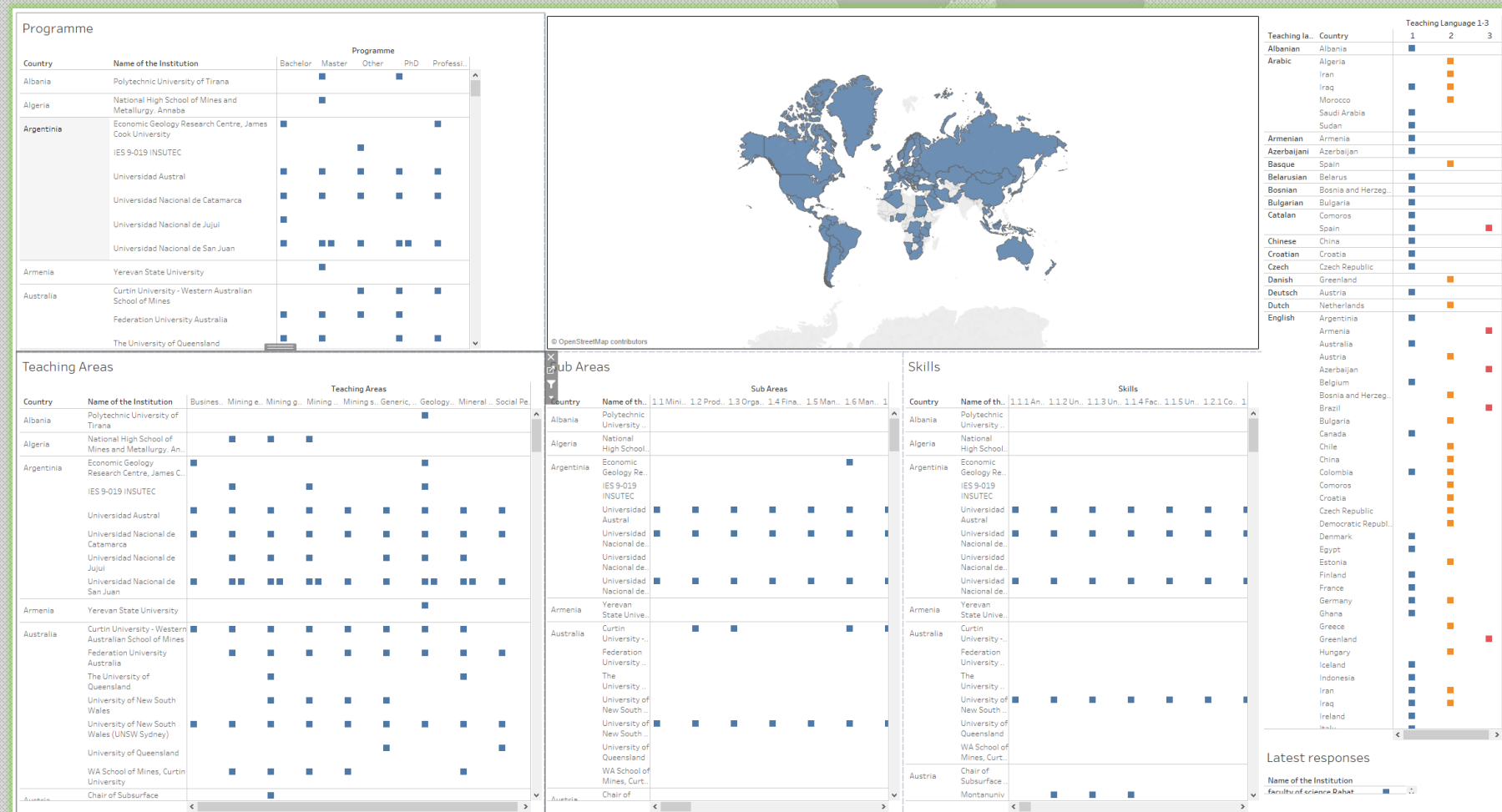
Teaching language



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Mapping of training programmes



D1.1: Skills Catalogue

D1.2: Database process manual

D1.3: Repository of training programmes

Excel table (database), „Tableau“ evaluation, Interactive map on Intermin-homepage

Hartlieb, P. (2020): Data for: A comprehensive skills catalogue for the raw materials sector and the structure of raw materials education worldwide. With assistance of Correia, V., Jorda Bordehore, L., Regueiro Y Gonzalez-Barros, M., Vidović, J., Wenighofer, R., DOI: 10.17632/SP3DVHR8Y3.1.

Hartlieb, P.; Jorda Bordehore, L.; Regueiro y González-Barros, M.; Correia, V.; Vidovic, J. (2020): A comprehensive skills catalogue for the raw materials sector and the structure of raw materials education worldwide. In *Mining Technology* 129 (2), pp. 1–13, DOI:

Hartlieb, P. (2019): Introduction to the EU H2020-Project International Network of Raw Materials Training Centres (Intermin). In : Conference Proceedings SOMP AMC 2019.

Hartlieb, P.; Jorda, L.; Correa, V.; Regueiro, M.; Vidovic, J.; Malyuk, B. (2019): Introduction to the EU H2020-Project International Network of Raw Materials Training Centres (Intermin). In *Mining Report Glückauf* 155 (6). Available online at https://mining-report.de/wp-content/uploads/_pda/2019/12/MRG_1906_EU_H2020_Project_INTERMIN_Peer_Review_191210.pdf.

- New concepts for assessing raw materials education needed
- Skills and knowledge instead of topic and credits
- Structure of raw materials education one-sided
 - > geology, pure mining,
 - < business, social issues

Interminproject.org



mining engineering
mineral economics

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