Definition of PL/PT Strategic Areas

Milestone 6

Funded by the European Union

The Methodology

8 Research Indicators
(to be collected at each University)

Catalogued by

12 Scientific Areas
(adapted from the ERC panels*)

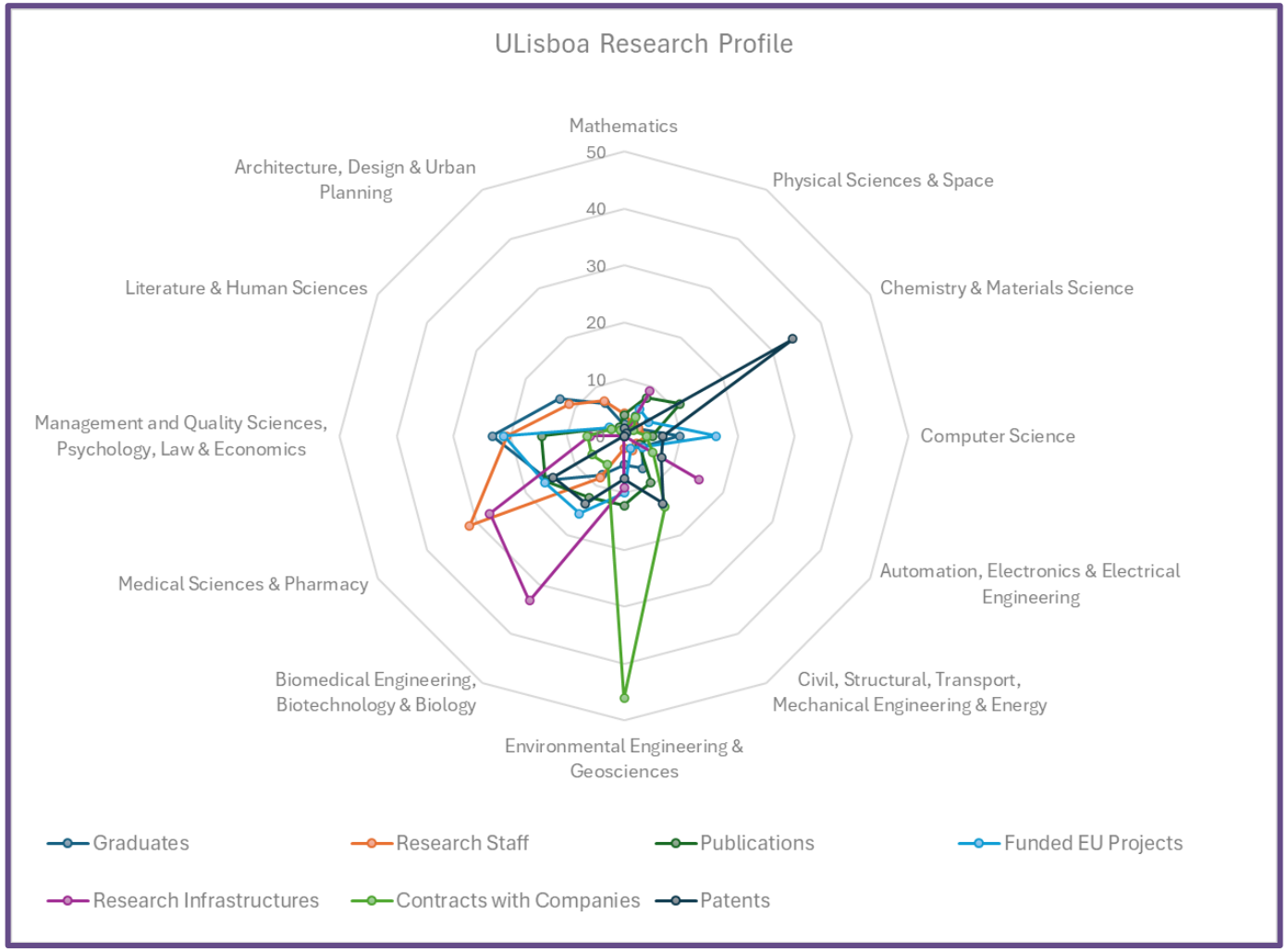
1. Number of Graduates/Year (considering data for the most recent years): ***Graduates***
2. Number of Actual Research Staff: ***Research Staff***
3. Number of Publications for the period 2019-2024: ***Publications***
4. Number of Applications for Funding in EU calls for the period 2019-2024 (H2020 or Horizon Europe): ***Applications EU Projects***
5. Number of Funded EU projects for the period 2019-2024 (H2020 or Horizon Europe): ***Funded EU Projects***
6. Number of available shared Experimental Facilities: ***Research Infrastructures***
7. Number of Contracts with Industry for the period 2019-2024: ***Contracts with Companies***
8. Number of Patents for the period 2019-2024: ***Patents***

1. Mathematics (PE1)
2. Physical Sciences & Space (PE2, PE3, PE9)
3. Chemistry & Materials Science (PE4, PE5, PE11)
4. Computer Science (PE6)
5. Automation, Electronics & Electrical Engineering (PE7)
6. Civil, Structural, Transport, Mechanical Engineering & Energy (PE8)
7. Environmental Engineering & Geosciences (PE10)
8. Biomedical Engineering, Biotechnology & Biology (LS1, LS2, LS3, LS8, LS9)
9. Medical Sciences & Pharmacy (LS4, LS5, LS6, LS7)
10. Management and Quality Sciences, Psychology, Law & Economics (SH1, SH2, SH3, SH4)
11. Literature & Human Sciences (SH5, SH6)
12. Architecture, Design & Urban Planning (SH7, SH8)

The data collected is not provided as absolute values, but was treated and is provided in percentage values for each of the 12 Scientific Areas proposed, since the goal was to identify the distribution of activities in the 8 Research Indicators.

*The European Research Council (ERC) defined 28 panels that cover all research domains: 11 panels in Physical Sciences and Engineering (PE), 9 panels in Life Sciences (LS) and 8 in Social Sciences and Humanities (SH).

The Research Profiles from PL and PT



Research indicators are displayed as normalised values, i.e., the calculated percentage distribution across the selected scientific areas

The ULisboa Research Profile

Medical Sciences & Pharmacy, and *Management & Quality Sciences* show relatively strong performance across multiple indicators.

Biomedical Engineering, Biotechnology & Biology as well as *Chemistry & Materials Science* exhibit high values for publications.

Environmental Engineering & Geosciences evidences good indicators, including partnerships with companies.

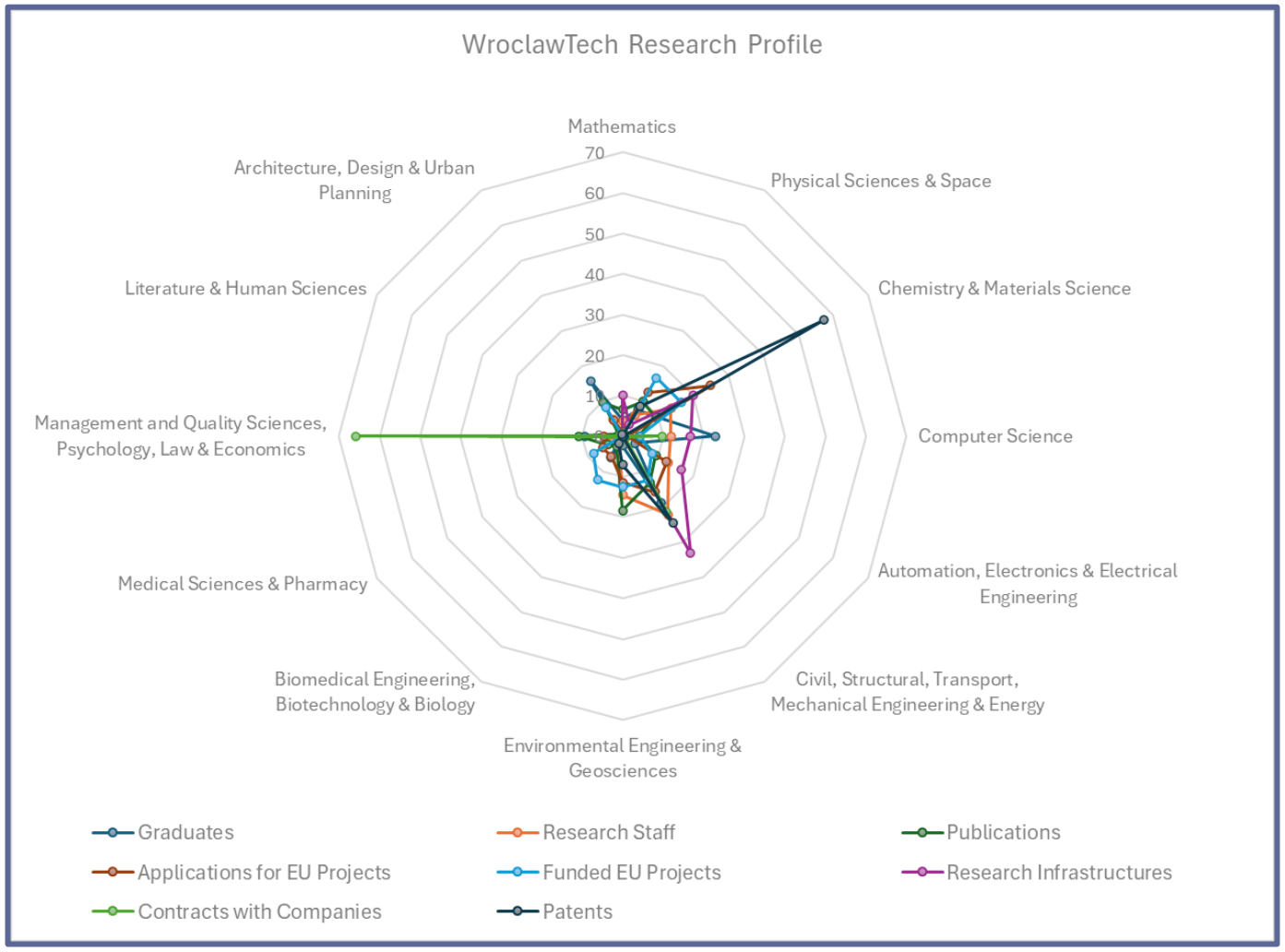
Patents are most prominent in *Chemistry & Material Science*, followed by the Engineering and Life Sciences disciplines.

Computer Science and the Life Sciences are successful in competitive funding in EU projects.

Strong research output in technical and applied sciences, with Engineering, Biomedical Sciences, and Chemistry showing high performance in key metrics.

Industry collaborations and patents are concentrated in engineering fields, while humanities and social sciences focus more on publications and research staff.

The Research Profiles from PL and PT



The WroclawTech Research Profile

Exhibits high number of patents in *Chemistry & Materials Science*, suggesting a strong emphasis on innovation and intellectual property in this field.

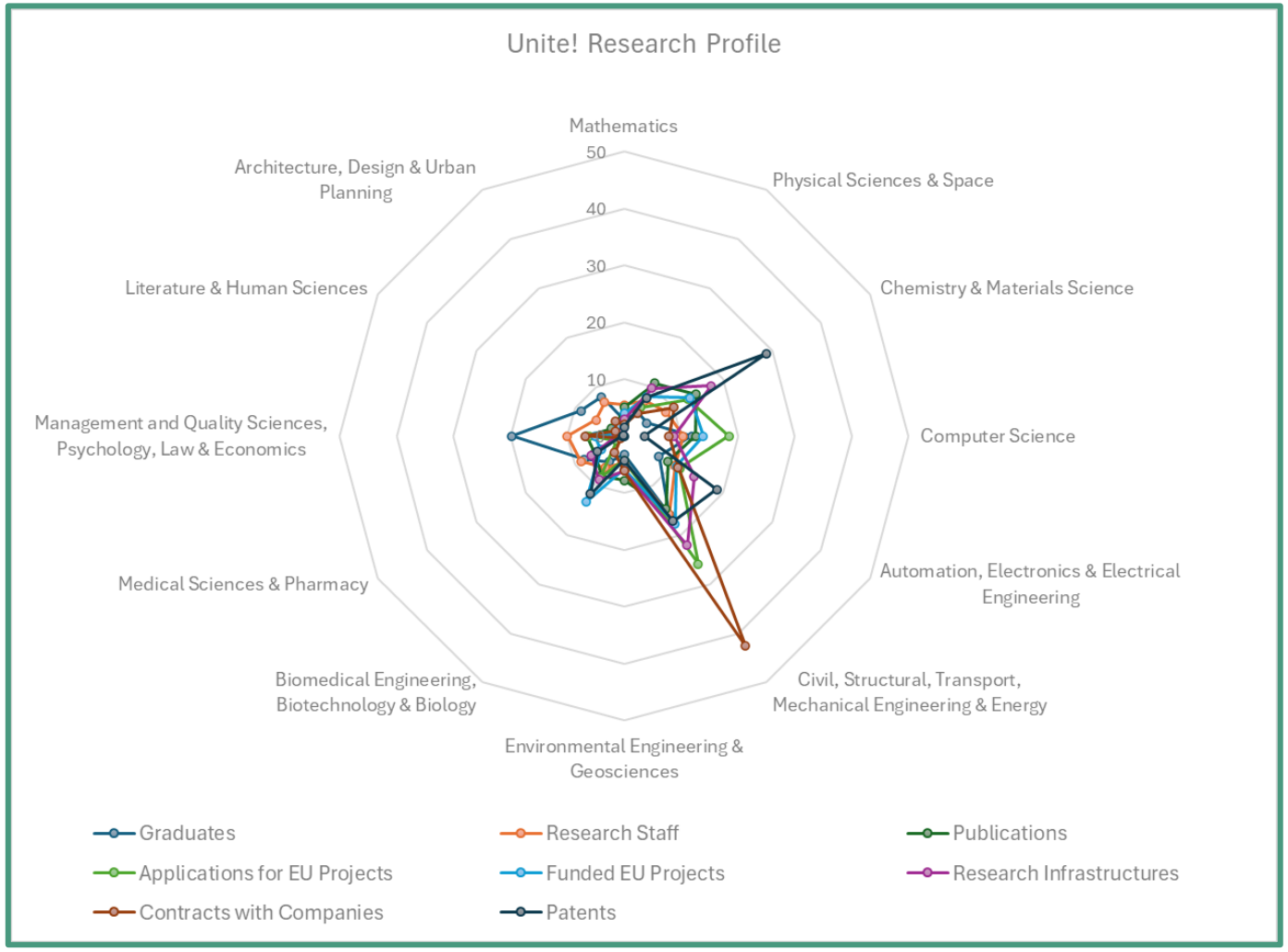
Biomedical Engineering, *Automation*, and *Environmental Sciences* have strong research activity, as highlighted by publications, funding applications, and experimental facilities.

Biomedical Engineering, *Automation*, and *Civil Engineering* are also well-supported in terms of funding by EU projects.

Architecture, Design & Urban Planning have a good number of publications and graduates, becoming an area of interest.

Chemistry and *Engineering* show good results in number of patents and contracts, displaying engagement in industry partnerships.

The Research Profile from Unite!



Key Strengths of The Unite! Research Profile

Strong performance in Applied Sciences and Engineering

✓ Biomedical Engineering, Biotechnology & Biology
High scores in publications, funded projects and experimental facilities.

✓Automation, Electronics & Electrical Engineering
Performs well in patents, EU funding applications, and contracts with industry, highlighting research impact and innovation potential.

✓ Chemistry & Materials Science
Stands out with strong patents and EU funding success, suggesting robust research and commercialization potential.

Biomedical Engineering, Chemistry, and Electrical Engineering perform well in *funded EU projects* and *research staff* availability
⇒ Strong international collaborations and funding availability.

Contracts with companies are most significant in Engineering fields (Automation, Mechanical, and Chemical Engineering).

Patents are notably high in Chemistry and Engineering
⇒ Active innovation performance.

General Considerations

- The results previously presented are only indicative, but allow for strategic orientation.
- The results were supported by previous deliverables and analysis of policy documents, regulations and legal acts at the level of the European Union and Poland and Portugal as widening countries.

- ULisboa and WroclawTech should focus on strategic research areas that potentially:
  1. Have already gained significant traction at the Universities;
  2. Need further development in some of dimensions as identified in the results of the data collection phase;
  3. Correspond to areas in which the UNITE! Widening Alliance shows a significant development and innovation potential, as identified in the results of the data collection phase.

PL/PT Strategic Areas

Health & Biotech **Coord. ULisboa**

(includes: Medical Sciences, Biomedical Engineering & Biotechnology)

Urban & Resources Sustainability **Coord. WroclawTech**

(includes: Sustainable, beautiful, inclusive and climate resilient cities, clean and secure energy, water and environment)

Circular Economy & Materials **Coord. WroclawTech**

(includes: Circular economy, environmental engineering, chemistry , advanced materials and nanotechnology)

Digital & Autonomous Technologies **Coord. ULisboa**

(includes: Automation, Robotics and Digital)

unite! | Widening

Get involved!

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