

PROJECT MANAGEMENT: RADARGRAM PLOT TO VALIDATE STAKEHOLDER TECHNOLOGY IMPLEMENTED IN A RESEARCH PROJECT

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The results validation is an important step to perform at the end of a research project. For projects characterized by innovative digital and hardware technologies, the validation process can be considered a relevant milestone (project control point [1]). The goal of this report is to provide a model suitable to quantify the impact of technologies and project results according to the point of view of the stakeholders (final end users of the implemented advanced technologies). In particular, the proposed methodology is based on the formulation of a radargram plot suitable to estimate “backward” (achievements) and “forward” (expectations) parameters of the validation model: the first parameters are related to the implemented prototypes, and the second ones refer to the forecast aspects. Four main validation parameters are adopted for the project prototype validation:

- 1) Prototype Readiness: it is a “backward” parameter estimating prototype technology assessment and its usability;
- 2) Knowledge Gain: it is a “backward” parameter useful to evaluate how the implemented technology has been able to provide further knowledge, if compared with the “AS IS” condition;
- 3) Business Impact: it is a “forward” parameter mainly representing the stakeholder opinion about the technology impact on the “TO BE” business models and new processes (an updated business model can provide a possible estimation);
- 4) Probability To Use: the “forward” parameter is representative of the probability for the new implemented technology to be actually adopted in the next years.

The four parameters are plotted into a radargram type graph. Each radargram can be referred to a specific “macro-functionality” provided at the end of the project. The “forward” parameters could be forecasted in a time range of five years, or according to the business plan prevision period. The scale to adopt assigning values, can be the following: (1) VERY LOW, (2) LOW; (3) ENOUGH; (4) HIGH. In the figure indicated below is sketched an example of a radargram generated by the proposed model. Each parameter can “enclose” other sub-parameters defining sub-radargrams explaining the final score.

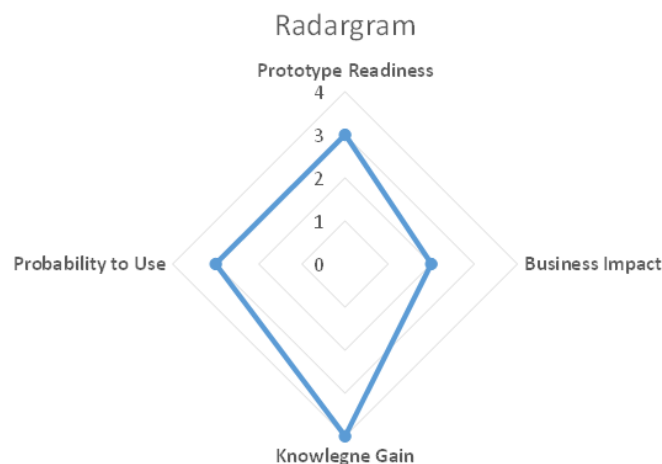


Figure: Radargram example plotting validation parameters.

References:

[1] Alessandro Massaro, "Scientific Research in Industry," in *Electronics in Advanced Research Industries: Industry 4.0 to Industry 5.0 Advances*, IEEE, 2022, pp.445-506, doi: 10.1002/9781119716907.ch10. <https://doi.org/10.1002/9781119716907.ch10>