PRISMA 2020 Checklist

Manuscript: A Systematic Review of Product–Service System Modularization: Thematic Taxonomy, Methodological Capabilities, and an Integrative Framework for Future Research

Section	Item	Checklist item / reporting requirement	Where reported in the manuscript / editorial verification
TITLE	**1**	Title: Identify the report as a systematic review.	Title page.
ABSTRACT	**2**	Abstract: Report the key elements recommended in PRISMA 2020 for Abstracts.	Abstract (partial: search databases, cutoff date and exclusions not stated).
INTRODUCTION	**3**	Rationale: Describe the rationale in the context of existing knowledge.	§1 Introduction.
INTRODUCTION	**4**	Objectives: Provide explicit review objectives or questions.	§1 Introduction, final paragraphs.
METHODS	**5**	Eligibility criteria: Describe inclusion/exclusion criteria and how studies were grouped.	§§2.2.2, 2.4.
METHODS	**6**	Information sources: List information sources searched and their last search dates.	§2.2 (Scopus and WoS, 20 July 2026).
METHODS	**7**	Search strategy: Provide full search strategies for every source, including limits and filters.	§2.2.1 (Scopus and WoS query strings).
METHODS	**8**	Selection process: Describe how eligibility decisions were made, number of reviewers and independence.	§2.2.2 (deduplication and criteria); reviewer roles not stated.
METHODS	**9**	Data collection process: Describe who extracted/coded data, whether independently, and reconciliation procedures.	§§2.3–2.7 (coding described, reviewer roles and reconciliation unspecified).
METHODS	**10a**	Data items: outcomes: Define the outcome domains or endpoints for which data were sought.	§§2.3–2.6 (thematic categories, capabilities and integration levels; non-intervention review).
METHODS	**10b**	Data items: other variables: Define other variables extracted and assumptions about unavailable information.	§§2.3–2.7; missing-data assumptions not explicitly discussed.
METHODS	**11**	Risk-of-bias assessment: Describe methods used to assess risk of bias in included studies.	Not reported. Clarify whether formal appraisal was performed or not appropriate to the mapping objective.
METHODS	**12**	Effect measures: Specify summary effect measures for outcomes, where applicable.	Not applicable to an intervention-effect synthesis; frequencies/percentages are descriptive (§§2.5–2.6).
METHODS	**13a**	Synthesis: eligibility: Explain how reports were assigned to each synthesis.	§§2.2.2, 2.3–2.6 (209 overall vs. 108 methodological).
METHODS	**13b**	Synthesis: data preparation: Describe data preparation or transformations before synthesis.	§§2.2.2, 2.5, 2.7.
METHODS	**13c**	Synthesis: display: Describe tabulation and visualization methods.	§§2.3–2.7; Tables 1–6, Figures 2–7.
METHODS	**13d**	Synthesis: analytical methods: Describe methods for synthesis, software and rationale.	§§2.3–2.7 (classification, frequencies, hierarchical clustering, PCA).
METHODS	**13e**	Synthesis: heterogeneity: Describe methods to explore variability across studies, if applicable.	§§2.4, 2.7 and §3 (methodological families and author clustering; no effect heterogeneity).
METHODS	**13f**	Synthesis: sensitivity: Describe sensitivity analyses assessing robustness, if performed.	Not reported. Add an explicit statement if no sensitivity analysis was performed.
METHODS	**14**	Reporting-bias assessment: Describe methods used to assess missing-results reporting bias.	Not reported. Clarify whether assessed; discuss publication/indexing bias where relevant.
METHODS	**15**	Certainty assessment: Describe approach to assess certainty/confidence in a body of evidence.	Not reported. Clarify non-applicability or absence of formal certainty grading.
RESULTS	**16a**	Study selection: Report counts through identification, screening, retrieval, eligibility, inclusion.	§2.2.2 and Figure 1 (only initial, deduplicated and included totals established).
RESULTS	**16b**	Excluded reports: Cite apparently eligible reports excluded after full text and reasons, if any.	Not reported; requires screening/eligibility log.
RESULTS	**17**	Study characteristics: Cite and describe the included studies.	§§3.1–3.3 and Tables 1–3 (aggregate + exemplars; complete list of 209 not supplied).

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RESULTS	**18**	Risk of bias in studies: Present assessments of study risk of bias, if performed.	Not reported; see Item 11.
RESULTS	**19**	Results of individual studies: Report study-level effects/estimates where outcome synthesis is performed.	Not applicable to effect estimation; aggregate methodological evidence reported in §3.
RESULTS	**20a**	Synthesis results: overview: Summarize contributing studies and their characteristics.	§§3.1–3.4, Tables 1–4.
RESULTS	**20b**	Synthesis results: estimates: Present results of conducted statistical syntheses.	§§3.1–3.4; descriptive frequencies and multivariate results (not a meta-analysis).
RESULTS	**20c**	Synthesis results: variability: Present findings on variability/heterogeneity if analyzed.	§§3.2–3.3 (families, clustering, PCA).
RESULTS	**20d**	Synthesis results: sensitivity: Present robustness/sensitivity analyses if performed.	Not reported; see Item 13f.
RESULTS	**21**	Reporting biases: Present assessment of biases due to missing results, if assessed.	Not reported; see Item 14.
RESULTS	**22**	Certainty of evidence: Present certainty/confidence assessment, if performed.	Not reported; see Item 15.
DISCUSSION	**23a**	Discussion: interpretation: Interpret results in context of other evidence.	§§4.1–4.4.
DISCUSSION	**23b**	Discussion: evidence limitations: Discuss limitations of evidence included in the review.	§4.5.
DISCUSSION	**23c**	Discussion: review limitations: Discuss limitations of review procedures.	§4.5 (database coverage and coding judgments).
DISCUSSION	**23d**	Discussion: implications: Discuss implications for practice, policy and research.	§§3.5, 4.3–4.4, 5.
OTHER	**24a**	Registration: Provide registration information or explicitly state not registered.	Not reported. Authors must confirm registration status.
OTHER	**24b**	Protocol availability: Identify where the protocol is available or state none was prepared.	Not reported. Authors must confirm whether a protocol was prepared.
OTHER	**24c**	Protocol amendments: Describe protocol changes, or state none, when relevant.	Not reported. Requires authors' confirmation.
OTHER	**25**	Support: State financial/non-financial support and any sponsor role.	Funding statement (no external funding); non-financial support not described.
OTHER	**26**	Competing interests: Disclose competing interests of review authors.	Conflicts of Interest statement.
OTHER	**27**	Availability of materials: Identify available forms, extracted datasets, analytic code and other materials.	Data Availability Statement (availability and repository locations insufficiently specific).

Source: Page, M.J. et al. The PRISMA 2020 statement: An updated guideline for reporting systematic reviews. BMJ 2021, 372, n71. https://doi.org/10.1136/bmj.n71. Official resources: https://www.prisma-statement.org/prisma-2020-checklist.