

Nov 29, 2025

Systematic Framework Development for Organizational Analysis in Complex Institutional Environments

DOI

<https://dx.doi.org/10.17504/protocols.io.6qpvrwj5blmk/v1>

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Protocol Citation: Nabil Zary 2025. Systematic Framework Development for Organizational Analysis in Complex Institutional Environments. [protocols.io https://dx.doi.org/10.17504/protocols.io.6qpvrwj5blmk/v1](https://dx.doi.org/10.17504/protocols.io.6qpvrwj5blmk/v1)

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Protocol status: Working

We use this protocol and it's working

Created: November 29, 2025

Last Modified: November 29, 2025

Protocol Integer ID: 233782

Keywords: systematic literature synthesis, framework development, organizational analysis, thematic analysis, mission-driven design, implementation science, economic analysis, organizational models within academic health system, systematic framework development for organizational analysis, institutional missions to essential service, complex institutional setting, complex institutional environment, institutional setting, academic health system, complex institutional environments this protocol, organizational analysis, institutional mission, systematic framework development, organizational structure, organizational design, organizational model, organizational theory, specific guidance for organizational decision, making in complex institutional setting, application of organizational theory, different organizational option, established qualitative research method, organizational decision, qualitative research method, systematic review of literature, systematic review, analysis as the core principle, analytical framework, based

Abstract

This protocol outlines a structured approach to developing evidence-based analytical frameworks that support organizational decision-making in complex institutional settings where multiple models exist, with no clear evidence of one being superior. The seven-step process combines a systematic review of literature from both academic and gray sources, thematic analysis based on established qualitative research methods, application of organizational theory as analytical perspectives rather than strict templates, economic modeling to compare costs and benefits of different organizational options, and iterative refinement of the framework through expert feedback. Its key contribution is emphasizing mission-driven analysis as the core principle for organizational design, proposing that organizational structure should be systematically derived from institutional missions to essential services, service delivery needs, and enabling structures. This positions organizational structure as a dependent variable shaped by mission requirements, not an independent choice based on theory, peer imitation, or convenience. Initially tested in the context of library organizational models within academic health systems, this protocol offers a flexible approach suitable for various professional and institutional settings where practitioners require systematic, context-specific guidance for organizational decisions rather than universal solutions.

Guidelines

This protocol enables researchers to develop evidence-based analytical frameworks for organizational decision-making in complex institutional environments. The methodology is particularly suited for contexts where: (1) multiple organizational models exist without clear evidence of superiority; (2) institutional context significantly influences organizational effectiveness; (3) practical guidance for practitioners is needed; and (4) existing literature is primarily descriptive rather than analytical.

Materials

- Reference management software (e.g., Zotero, EndNote, Mendeley)
- Qualitative analysis software (e.g., NVivo, Atlas.ti, or manual coding system)
- Spreadsheet software for economic modeling
- Access to academic databases (discipline-specific and interdisciplinary)
- Estimated time: 4-8 months for comprehensive framework development

Before start

Prerequisites

Research Team Capabilities:

- Expertise in systematic literature review methodology
- Familiarity with qualitative thematic analysis approaches
- Domain knowledge in the organizational context under study
- Basic economic analysis and cost modeling capabilities
- Access to relevant databases and gray literature sources

Required Resources:

- Reference management software (e.g., Zotero, EndNote, Mendeley)
- Qualitative analysis software (e.g., NVivo, Atlas.ti, or manual coding system)
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Expected Results

Following this protocol should yield:

- Comprehensive characterization of organizational models in the domain under study
- Mission-driven analytical framework for organizational decision-making
- Economic analysis comparing costs and value generation across models
- Practical decision tools for institutional leaders
- Implementation guidance grounded in change management principles
- Documentation enabling replication and adaptation for other contexts



Define Research Questions and Scope

2h

1 Formulate Primary Research Questions

2h

Develop research questions that address organizational model characterization, contextual factors influencing effectiveness, and practical guidance needs. Questions should be specific enough to guide literature searching while broad enough to capture organizational complexity.

Example question types:

- What organizational models exist in [context], and what factors influence their effectiveness?
- How can organizational principles from [related field] inform Organizational design in [target context]?
- How can organizations structure services to support [specific stakeholder requirements]?
- What principles enable mission-driven organizational design applicable across diverse contexts?

2 Establish Scope and Delimitations

Establish clear boundaries for organizational types, institutional contexts, geographic scope, and time periods. Clearly document these delimitations to enable future users to assess the transferability of the findings.

3 Identify Stakeholder Groups

Map all stakeholder groups whose needs the framework must address. For each group, identify: primary information needs, service requirements, organizational positioning implications, and potential conflicts with other stakeholder interests.

Systematic Literature Synthesis

3d 8h

4 Database Selection

3d 8h

Select databases appropriate to the organizational domain under study. Include both discipline-specific databases and interdisciplinary sources to capture organizational research from multiple perspectives.

Recommended database categories:

- Domain-specific databases (e.g., PubMed for health, ERIC for education)
- Library and information science databases (e.g., LISTA, Library Literature)

- Interdisciplinary databases (Web of Science, Scopus)
- Business and management databases for organizational theory
- Gray literature sources (professional associations, institutional reports)

5 Search Strategy Development

Develop a search strategy using three conceptual blocks combined with Boolean operators:

- Concept 1 - Organizational unit type: Terms describing the organizational unit under study (e.g., "academic health sciences library" OR "medical library")
- Concept 2 - Organizational elements: Terms describing organizational structure (e.g., organization* OR structure* OR governance OR "service model*")
- Concept 3 - Institutional context: Terms describing the broader institutional environment (e.g., "academic health system*" OR "teaching hospital*")

Combined search: (Concept 1) AND (Concept 2) AND (Concept 3)

6 Inclusion and Exclusion Criteria

Establish explicit criteria before screening begins. Document the requirements in the protocol to ensure consistent application.

Typical inclusion criteria:

- Focus on the organizational unit type under study
- Addresses organizational structure, governance, or service delivery models
- Published within a defined time period (typically 15-25 years)
- Peer-reviewed articles, organizational reports, or institutional documents

Typical exclusion criteria:

- Outside organizational context under study
- Focus solely on technical operations without organizational implications
- Opinion pieces without substantive organizational analysis

7 Study Selection Process

Conduct selection in phases with documented decisions:

- Phase 1 - Initial search and deduplication: Combine searches across databases, export to reference management system, remove duplicates
- Phase 2 - Title and abstract screening: Two independent reviewers screen all titles/abstracts against inclusion criteria; resolve disagreements through discussion

- Phase 3 - Full-text assessment: Retrieve full texts, assess eligibility independently, document exclusion reasons
- Phase 4 - Citation chaining: Review reference lists of included studies, conduct forward citation searching for key articles

8 Data Extraction

Extract data using a standardized form, including:

- Bibliographic information (authors, year, title, source, country/region)
- Institutional context (organization type, size, programs, geographic distribution)
- Organizational model description (reporting structure, governance, budget sources)
- Service portfolio and stakeholder groups served
- Outcomes, success factors, and challenges reported
- Transferable insights and lessons learned

Thematic Analysis

1d 16h

9 Phase 1: Familiarization

- Read all included studies in full at least once
- Document initial observations and patterns in research notes
- Create preliminary memos on recurring themes and concepts

10 Phase 2: Generating Initial Codes

- Develop an initial coding framework with both deductive codes (derived from research questions) and inductive codes (emerging from data)
- Apply codes systematically to all extracted data using qualitative analysis software
- Maintain codebook with definitions and examples.

Example coding categories:

- Organizational models (independent, integrated, hybrid, distributed)
- Service delivery patterns (centralized, distributed, hub-spoke)
- Stakeholder groups and needs
- Success factors and enablers
- Challenges and barriers

11 Phases 3-4: Searching for and Reviewing Themes

- Group codes into potential themes using visual mapping
- Check themes against coded data for coherence and distinctiveness
- Refine theme boundaries through iterative review
- Create a thematic map showing relationships between themes



12 Phases 5-6: Defining Themes and Reporting

- Develop a detailed description of each theme with sub-themes
- Determine how themes relate to research questions
- Select illustrative examples for each theme
- Synthesize findings into a narrative, connecting themes to framework development

Framework Development

1d 16h

13 Initial Framework Conceptualization

- Synthesize organizational models identified through literature synthesis
- Identify key decision factors affecting model selection
- Map stakeholder considerations to organizational structures
- Develop a preliminary framework structure with major components

14 Organizational Theory Integration

Apply relevant organizational theories as analytical lenses (not prescriptive templates):

- Stakeholder theory: Analyze how different structures serve different stakeholder interests
- Resource dependency theory: Examine how structures reflect resource dependencies
- Institutional theory: Consider how structures conform to external legitimacy pressures
- Service delivery models: Apply operations principles to the service organization

15 Mission-to-Structure Translation Framework

Develop a systematic translation process from institutional missions to organizational structures:

- Stage 1 - Mission Analysis: Detailed decomposition of what the institution actually does across all mission domains
- Stage 2 - Service Requirements Mapping: Systematic identification of services essential for each mission component
- Stage 3 - Service Characteristics Analysis: Examination of specialization level, geographic dependence, time sensitivity, and volume for each service
- Stage 4 - Structure Evaluation: Matching service requirements to the organizational capabilities of different models

16 Iterative Refinement

- Apply the preliminary framework to published institutional examples
- Identify gaps, inconsistencies, and areas requiring clarification
- Refine framework categories and relationships



- Seek expert review and incorporate feedback
- Continue refinement until the framework meets the quality criteria

Economic Analysis

20h

17 Cost Model Development

Develop cost models for each organizational model identified:

- Personnel costs: staffing levels by position type, salary benchmarks (use published surveys), loaded costs including benefits
- Non-personnel costs: collections/resources, technology infrastructure, space and operations, professional development
- Implementation costs: infrastructure setup, training, consulting, contingency
- Present cost ranges acknowledging variation across contexts

18 Value and Return on Investment Estimation

Estimate value generation for each model through:

- Avoided costs (eliminated duplication, efficiency gains)
- Productivity gains (time savings, enhanced efficiency)
- Quality improvements affecting institutional outcomes
- Strategic value (competitive positioning, mission achievement)

Critical note: Acknowledge uncertainty in value estimation. Present as reasoned estimates requiring empirical validation, not precise calculations.

19 Comparative Analysis

- Compare absolute costs across organizational models
- Calculate per-capita costs based on user populations served
- Estimate ROI ratios for each model
- Develop scenario analyses for different institutional contexts

Quality Assurance and Validation

16h

20 Framework Quality Criteria

Evaluate framework against quality criteria:

- Comprehensiveness: Captures all major organizational model variations found in the literature
- Coherence: Logical relationships between framework components
- Utility: Practical for institutional decision-making
- Transferability: Applicable across different institutional contexts

- 21 Expert Review Process
 - Clarity: Accessible to non-expert audiences
 - Identify experts with diverse perspectives (practitioners, administrators, researchers)
 - Provide structured review questions focusing on completeness, accuracy, and utility
 - Synthesize feedback systematically
 - Incorporate revisions based on expert input
- 22 Documentation of Analytical Rigor
 - Credibility: Prolonged engagement, triangulation across sources, peer debriefing
 - Dependability: Audit trail of decisions, codebook documentation, consistency checks
 - Transferability: Thick description of contexts, explicit criteria, clear sampling approach
 - Confirmability: Reflexivity statement, data-grounded analysis, negative case analysis

Decision Tools and Implementation Guidance

20h

- 23 Decision Matrix Development

Translate framework into operational decision tools:

 - Create comparison tables summarizing model characteristics across key dimensions
 - Develop institutional context assessment worksheets
 - Design decision trees guiding model selection based on context factors
 - Create stakeholder priority matrices for weighing competing interests
- 24 Implementation Guidance Development

Develop practical implementation guidance, including:

 - Pre-implementation assessment protocols
 - Phased implementation timelines
 - Stakeholder engagement strategies
 - Change management approaches
 - Risk identification and mitigation strategies
 - Monitoring and adaptation protocols
- 25 Outcome Metrics

Define outcome-based metrics that enable the assessment of organizational effectiveness tied to mission achievement. Metrics should be practical to collect while providing meaningful evidence of impact.

Protocol references

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Acknowledgements

This protocol was developed through application to library organizational analysis in academic health systems. The methodology draws on established approaches in systematic review, thematic analysis, and framework development while emphasizing mission-driven organizational design as the foundational analytical principle.