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# A SOCIOTECHNICAL SYSTEMS REDSEIGN OF A CHILD WELFARE BUREAU

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# Objectives

## Participants will

- understand the key elements of a sociotechnical systems redesign process
  - understand factors which can lead to the success of a sociotechnical systems redesign
  - be able to preliminary assess possible opportunities to use a sociotechnical systems redesign process in an organization
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# Some history of organization design/redesign

- 1880s-present (?): Scientific management
  - 1950s: England coal mining: autonomous groups: birth of STS
  - 1960s-1990s: Other STS industrial applications (India, Sweden, etc.) and service sector applications
  - 1970s-1980s: Quality of Working Life movement
  - 1980s: Industrial democracy, employee ownership
  - 1980s–present: TQM, CQI, Lean Six Sigma, etc.
  - 1990s: Reinventing government
  - 1990s-present: Business Process Reengineering
  - Ongoing: downsizing, right sizing, capsizing
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# From “restructure” to “redesign”

- Organization design as a noun: describes
    - Structure
      - Unit groupings, reporting relationships
    - Processes
      - Communication, coordination, decision making, culture
  - Organization design (or redesign) as a verb:
    - Creating or modifying an organization’s structures and processes
  - Restructuring
    - usually misses or underemphasizes processes
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# A sociotechnical system

- **Social system:** organizational culture, management and decision making processes, leadership styles, and communication.
  - **Technology system:** core technologies including practice/treatment models and administrative support processes and equipment.
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# Common usage in HSOs

- analyzing how an organization's social resources (the skills of its workers, knowledge and experience, communication networks) are consonant with its technical resources (how the work actually gets done) (Grobman, 1999).
  - organization's "core technology" (e.g., casework practice) is embedded within a social context (e.g., organizational culture and climate) that can either inhibit or enhance the core technology's effectiveness. (Glisson, et al., 2012)
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# STS definitions/key principles

- autonomous work groups, participation in decision making re: the redesign
  - *minimum critical specifications*: higher levels give to lower levels only the required parameters for what a new process or system needs to include
  - joint optimization: *alignment* of the organization's core technological processes and the organization's social system
  - Variance as deviation from a norm
  - Control/correct variance at its source
  - *Job* redesign: changing or reorganizing tasks, e.g., enlargement (more complex and challenging), enrichment (more autonomy, responsibility), flextime, telework, automation
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**Table 1.** Classic sociotechnical system design principles.

Principle	Explanation
Wholeness	The work system should be conceived as a set of activities making up a functioning whole, rather than a collection of individual jobs.
Teams	The work group should be considered more central than individual jobholders.
Process control	Variances (problems or deviations from expectations) should be identified and handled as close to their point of origin as possible, preferably by those who can prevent them from occurring, without requiring supervisory intervention
Self-direction	Internal regulation of the work system is preferable to external regulation of individuals by supervisors.
Multi-skilling	The underlying design philosophy should be based on a redundancy of functions rather than on a redundancy of parts (multiskilling vs. single-skilling).
Discretion	The discretionary component of work is as important to the success of the system as the prescribed component.
Joint- optimization	The individual should be viewed as complementary to the machine rather than as an extension of it.
Adaptation	The design of work should be variety increasing rather than variety decreasing, meaning that individual and organizational learning is essential to allow organizational adaptation to change.
Meaning	At the level of the individual job in a socio-technical system, there should be for each person an optimal level of variety, learning opportunities, some scope for setting decisions that affect the outcomes of work, organizational support, a job worthy of societal recognition, and the potential for a desirable future.
Incompletion	Since the context of the organization will continue to evolve over time, no design can be considered 'finished.'



# Variance Matrix

## Matrix of Variances: Pension Claims

○ = Key Variance

Unit Operations ↓	Variances
I Received, and classified Request for payment	1: ○ 1 Volume of mail received
	2: : 2 Type of claimant (primary beneficiary or survivor)
	3: :X: 3 Correctness/completeness of policy # on mail
	4: :X: : ○ 4 Volume of rush requests
	5: :X: : : 5 Number of requests per piece of mail
	6: : : : :X: 6 Complexity of request
II Matched Policy and Request	7: :X: : : : 7 Timeliness of technical information from other depts.
	8: :X: :X:X:X: :X: ○ 8 Availability of Standard Policy File
	9: : :X: :X:X: : 9 Availability of request
	10: :X: : :X:X: : : 10 Completeness of information in request
III Approved or Denied Request	11: :X: :X: :X: :X:X:X:X: 11 Timeliness of transaction
	12: : : : :X:X: : : :X: 12 Number/type of terms in calculation (complexity)
	13: :X: : :X:X: : : :X:X:X: 13 Accuracy of award amount
	14: :X: :X:X:X:X:X:X: : :X: : 14 Number and origin of required signatures
	15: : : : :X: : : : :X: : : 15 Availability of materials to complete transaction
IV Distributed Payment and/ or Information	16: : : : : : : :X: : : :X:X: 16 Form of response (check, letter, form)
	17: :X: : : : : : :X:X:X: : :X: : 17 Timely distribution of materials
	18: : : : : : : : : : : : : 18

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# Quality of Working Life: the Four Cs

Taylor & Felten (1993)

Beyond the traditional lists of satisfiers  
(generalized feelings of satisfaction)

- Recognized **COMPETENCE** at the workplace
  - Acknowledged **CENTRALITY**, or real relevance, in applying that competence
  - Shared **COMMITMENT** to the purposes of the enterprise
  - Joint **CONTROL** over the product and the process
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## Levels of Design

### Strategic Design

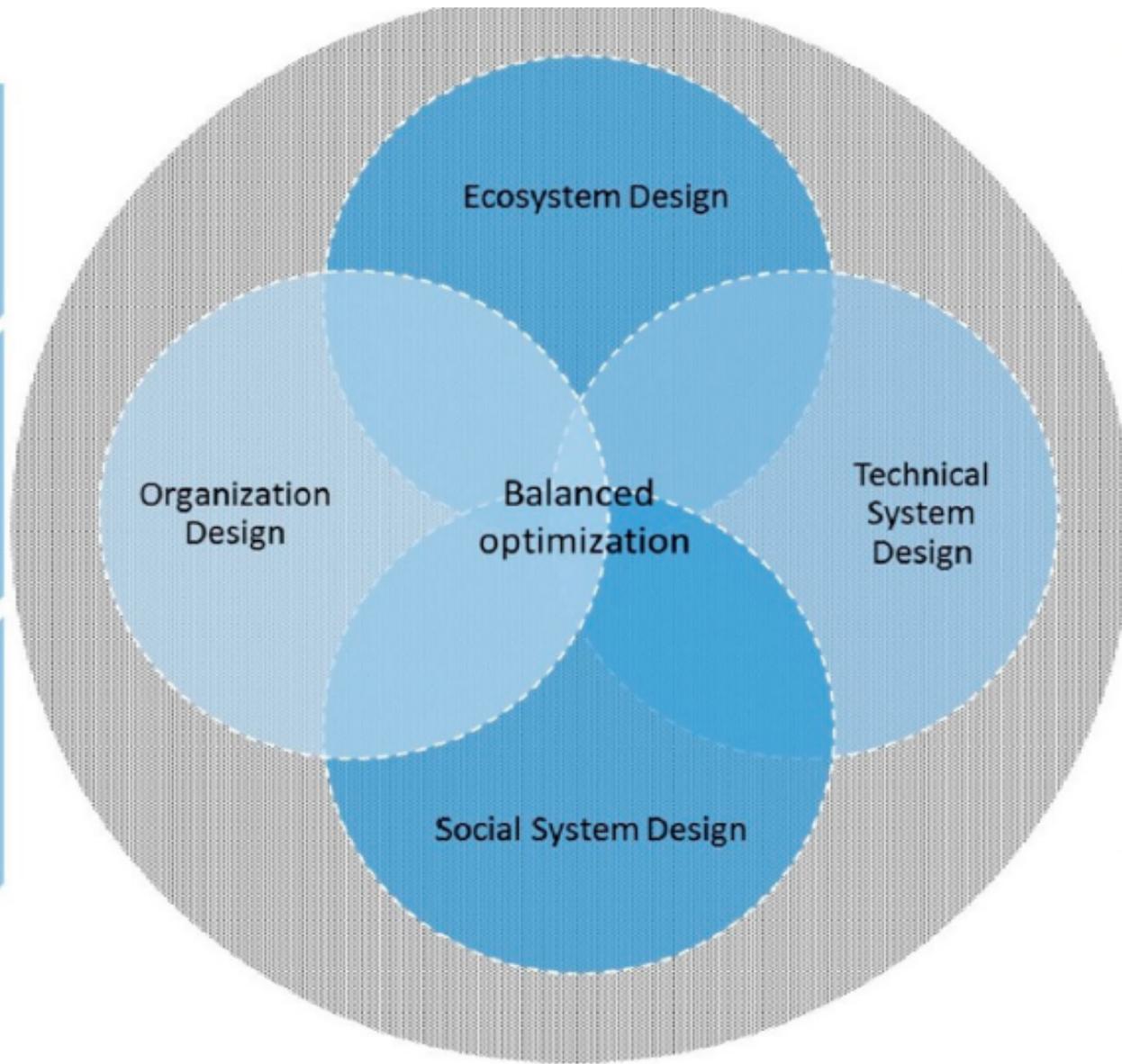
- Purpose
- Governance
- Ecosystem
- Organization

### Operating System

- Technology
- Social system

### Work

- Projects
- Expertise
- Processes



## Outcomes

Societal

Organizational

Individual

**Figure 3.** Sociotechnical systems design for organizations of the future.

**Table 2.** Shifts in sociotechnical systems design we expect to see in the future.

From	To
Designing an organization	Designing an organization and its ecosystem
Designing a static system	Designing a system that is in a continuous state of change
Designing social systems around a fixed technical system to achieve joint optimization	Designing organizations, ecosystems, technical systems and social systems on an ongoing basis as each element changes to achieve balanced optimization
Using an internal design team to represent the system being designed	Using design labs that bring many voices from inside and outside the system into the design process
Designing the work system	Designing the strategic, operating and work systems
Designing a system with a fixed membership for its current members	Designing a system in which many important contributions are made by people who come and go as their expertise is needed; designing for people who are not yet members of the system
Focusing exclusively on the internal workings of the system	Perfecting collaborative work among entities that compose the value chain
Designing for high performance and variance control	Designing for innovation and agility
Design based on analysis of current systems	Design based on ideas about what is possible

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# A STS Design Process for a HSO

1. Review the organization's purpose and strategic directions.
  2. Determine the best, evidence-based service delivery technologies for each program area.
  3. Examine in detail the processes through which clients travel during service delivery. Note the ways in which clients encounter staff from multiple programs, and as needed devise coordination mechanisms to minimize steps that clients need to take and maximize efficiencies and quality.
  3. Assess the organization's social system, including organizational culture, decision making and communication processes, coordination across functions or departments, leadership, and employee quality of working life considerations, and use these factors when considering structures.
  4. Determine the most appropriate organizational structure, with supporting social systems.
  5. Ensure that the entire system, including service delivery programs, structure, staff roles, and organizational processes are all aligned, or "fit" together.
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# The Case: Child Welfare Bureau

- 850 employees
  - participative process to transform the organization from a centralized to a regionalized service delivery system
  - Bureau decision to decentralize services into geographic regions
  - middle managers made initial decisions about which programs would be regionalized and which would remain centralized.
  - STS process to get involvement of multiple levels of staff in redesigning programs and work processes within the regional model
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# Multi-level change management system

- Executive team
  - Steering Committee
  - Design Team
  - Subcommittees
    - sociotechnical systems analysis
    - stakeholder surveys
    - the physical move
  - Some overlapping membership
  - Recommendations to design the new system
  - Broad representation from different programs and staff levels
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# Minimum critical expectations from the Executive Team

- minimal disruption to clients during worker changes
  - keeping operational costs within existing resources
  - consistent case handling and procedures across regions
  - compliance with state and county regulations
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# The process

- analyzed a wide range of program and administrative processes
  - consulted widely with program and administrative staff to recommend changes
  - groups met nearly weekly over five months
  - passed recommendations upward for review, refining ideas, and making decisions
  - at least two pilot projects were implemented to test new ideas
  - over 150 recommendations addressed subjects including
    - enhancing service components
    - new procedures for family reunification
    - increasing family-centered practices
    - training improvements
    - streamlining procedures
    - eliminating redundant procedures.
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# Implications for practice

## ■ Success factors:

- ❑ executive-level innovative leadership
  - ❑ Clearly defined roles and processes
  - ❑ robust ongoing communication (vertical, horizontal)
  - ❑ consultation provided through a university grant
  - ❑ highly participative process involving of all levels of staff
  - ❑ autonomy within minimum critical expectations
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Questions?  
Thoughts?

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