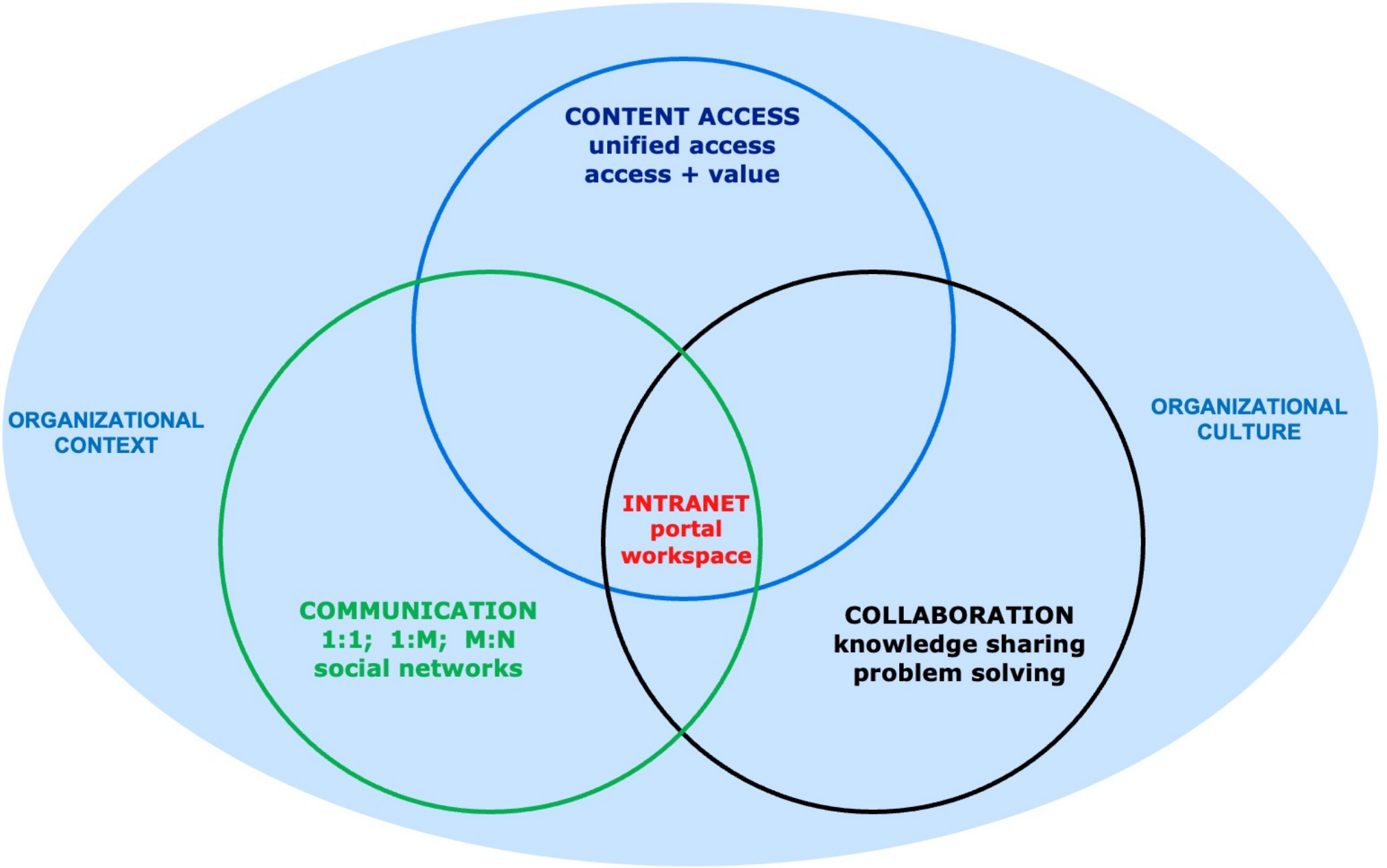
AGENDA

Intranet Design Framework

Intranet Design Project

INTRANETS
"Internal Internets" that combine:
Content access + Communication + Collaboration



Organizational Context of Intranet Design

- Many stakeholders:
  management, IT department, library/information center, user departments, employees, content providers, …

- Information behaviors, culture, politics are necessary and important elements of the analysis/design process

- **Intranet design should leverage detailed knowledge about its internal audience**

  Unlike a public website where the audience tends to be heterogeneous and vaguely defined, **intranets can be highly customized to a specific knowledgeable audience**.
  This audience is accessible, can be studied, can provide feedback.

A Behavioural-Ecological Framework for Intranet Design

1 Analyze organizations as **Information Ecologies**

2 Analyze users' information behaviors as being shaped by their **Information Use Environments**:

features of the work context that affect the flow and use of information

3 Design Intranets as **Value-Added Processes** that address:

- **organization's Information Management goals**
- **users' Information Use needs**

1. Analyze Organizations as Information Ecologies

Davenport 1997

1. Analyze Organizations as Information Ecologies

INFORMATION ECOLOGY

- **Information Goals & Strategy**

How will information make a strategic contribution to the organization

- **Information Politics**

Who has control over creation, ownership, distribution of information

- **Information Culture**

What are the attitudes, norms about sharing and using information

- **Information Staff**

Many groups of information professionals coordinate, collaborate

- **Information Processes**

Processes for collecting, organizing, preserving, protecting information

- **"Information Architecture"**

Formal definitions and rules for information entities and data properties

1. Analyze Organizations as Information Ecologies

INFORMATION ECOLOGY

- CREATE SHARED UNDERSTANDING of how information will make a strategic contribution to organization's success

- ENCOURAGE and SUPPORT certain modes of INFORMATION BEHAVIOUR → sharing, collaboration, innovation

- FIND ways to manage STAKEHOLDER COMPLEXITY where information is created and owned by multiple stakeholders

Information Politics

5 models of information governance:

- **technocratic utopianism**: technology can solve all problems of information governance
- **anarchy**: individuals manage their own information
- **feudalism**: units define and control their own information and share little information
- **monarchy**: a central person dictates information management policies
- **federalism**: units have autonomy but also consult and form consensus about policies.

(Davenport, Eccles, Prusak 1992)

Design Intranet to align with organization's information ecology

Information Goals & Strategy	During planning: Clearly define goals of the Intranet → link to mission and IM objectives
Information Politics	During planning: Create governance structures for coordination and oversight
Information Behavior & Culture	Design Intranet features that promote desired information behaviours (sharing, collaboration)
Information Staff	During planning: Clarify and coordinate roles of information staff groups
Information Processes, Architecture	Design Intranet features that promote use of metadata, tagging, categories, controlled vocabularies

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2. Analyze Information Behaviors in "Information Use Environments"

Taylor (1991): IUE are elements [of the work context] that

- affect the flow and use of information
- determine the criteria by which the value of information will be judged.

Elements of the IUE:

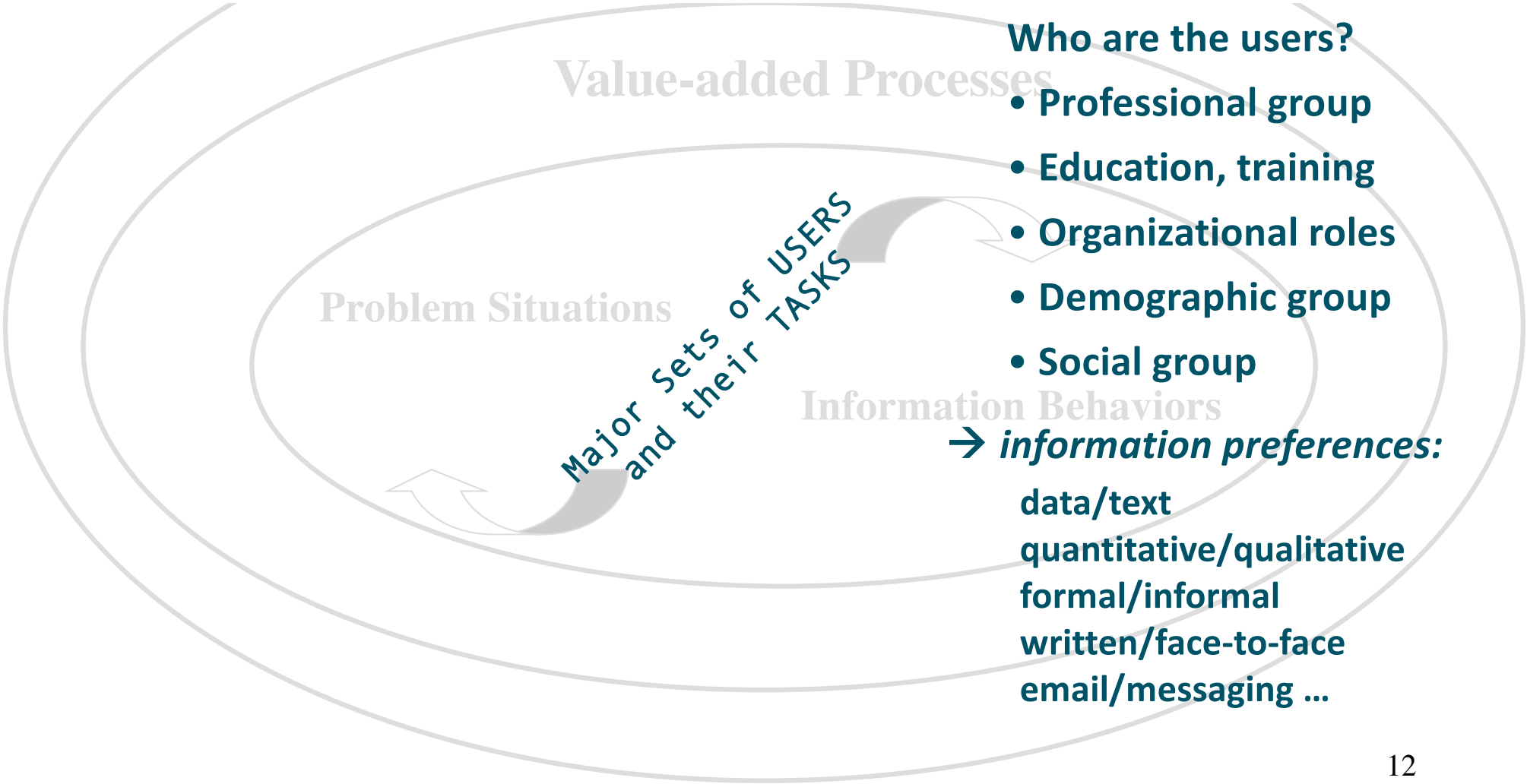
- **sets of people** who work on tasks that they see as problem situations with problem dimensions that they attend to
- they seek and use information to address these **problem situations / dimensions** + to complete their tasks
- they need information about task-specific subject matter + information about structure and context of the task problem.

2.1 Information Use Environment: (1) Sets of People or Users

Who are the users?

What are their information preferences?

What information tasks do they work on?



Who are the users?

- **Professional group**
- **Education, training**
- **Organizational roles**
- **Demographic group**
- **Social group**

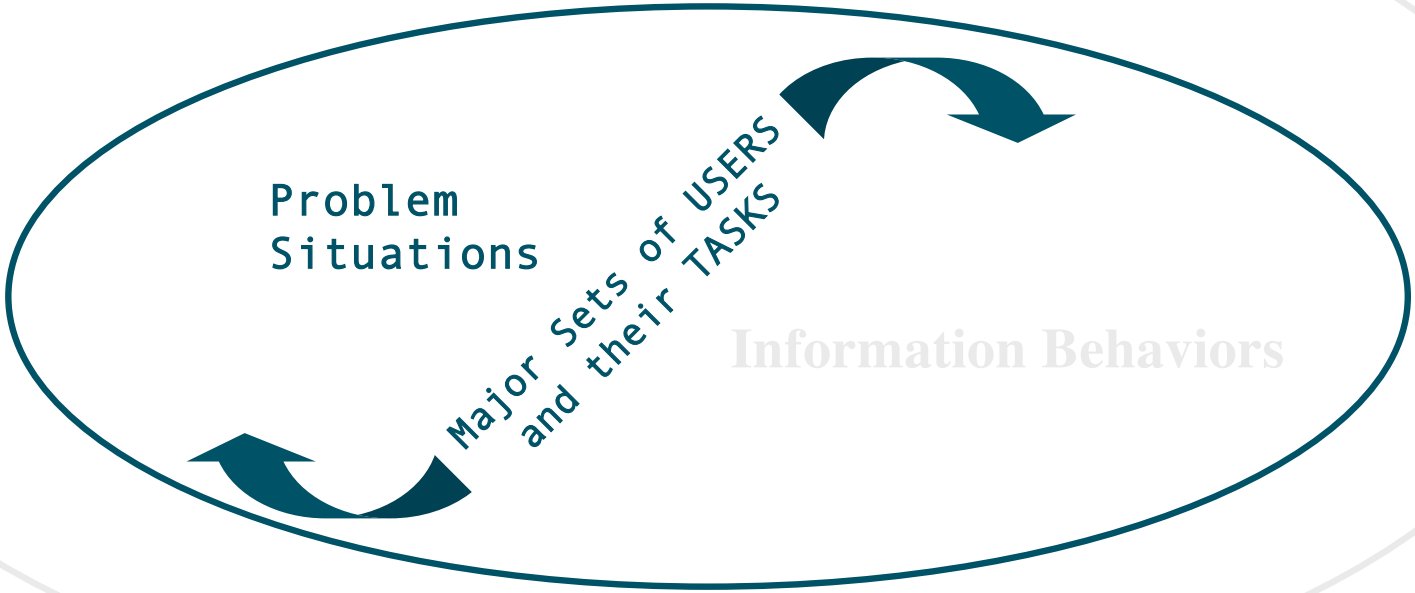
→ ***information preferences:***

data/text
quantitative/qualitative
formal/informal
written/face-to-face
email/messaging …

2.2 Information Use Environment: (2) Problem Situations

People look at their tasks as Problem Situations →
notice situational features that they view as problematic →
they attend to these Problem Dimensions to complete task.

E.g., Is the problem well-structured; Are the goals clear; Is there agreement about assumptions; Are there methods or procedures; How much risk is involved; Who owns the problem; …



Taylor 1991, Macmullin & Taylor 1984

2.2 Information Use Environment: (2) Problem Situations

PROBLEM DIMENSIONS

- Design / Discovery
- Well / Ill-Structured*
- Simple / Complex*
- Specific / Amorphous Goals
- Initial state understood / Not
- Assumptions agreed upon / Not*
- Assumptions explicit/ Not
- Familiar / New*
- Risky / Not risky
- Susceptible to analysis / Not
- Internal / External imposition

People look at their tasks as Problem Situations → notice situational aspects that they view as problematic → they attend to these **Problem Dimensions** to complete task.

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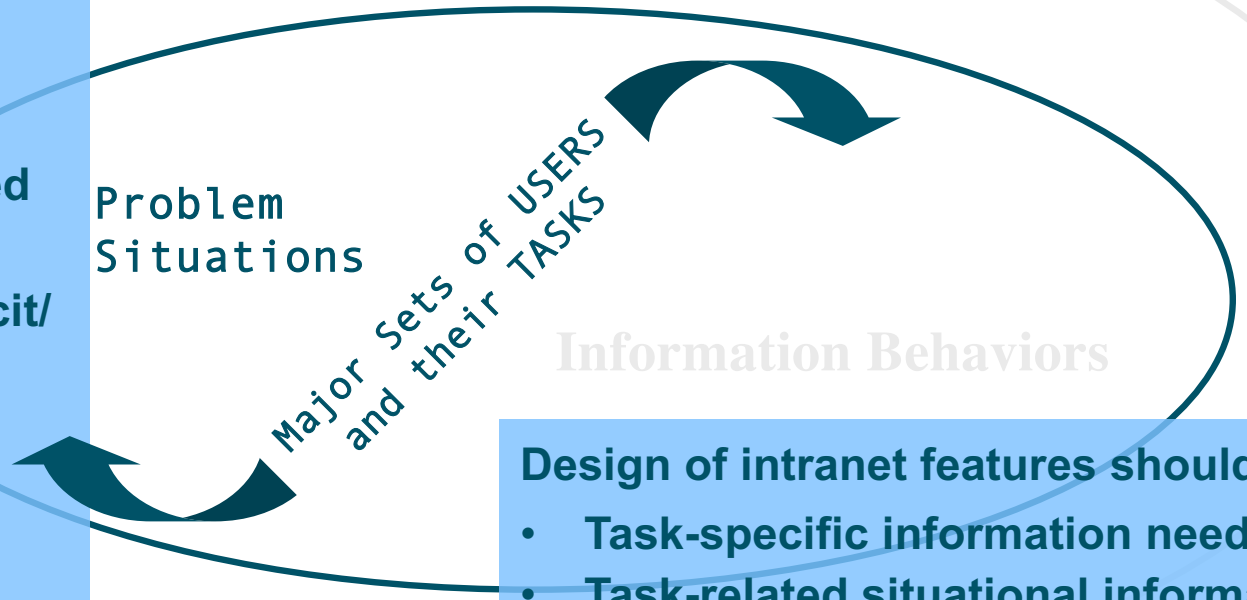


Design of intranet features should attend to

- Task-specific information needs
- Task-related situational information needs (problem dimensions)

Taylor 1991, Macmullin & Taylor 1984

Examples of Task-specific and Situational Information Needs

	Task specific information needs	
Search task	Names, keywords, subject of search query	
Collaboration task	Project deliverables, schedules, roles	
Discussion task	Questions posted, answers provided, participants	

Examples of Task-specific and Situational Information Needs

	Task specific information needs	Situational information needs
Search task	Names, keywords, subject of search query	**Is the search aimed at design or discovery? Is the search familiar or new?**
Collaboration task	Project deliverables, schedules, roles	**Is there agreement on goals, deliverables? Is task internally or externally imposed?**
Discussion task	Questions posted, answers provided, participants	**Are problems simple or complex? Are there assumptions to be clarified?**

Problem Dimensions	Situational Information Needs
Design Discovery	Design problem → creating desired product/result Discovery problem → determining the facts of a situation
Well-structured **Ill-structured**	WSP can be solved by applying logic, analysis, algorithms ISP cannot be solved by analysis only, needs intuition, insight
Complex **Simple**	Complex problem needs to be reduced to manageable blocks Simple problem has a clear path from initial to end state
Specific goals Amorphous goals	Specific goals can be operationalized, measured Amorphous goals state general directions, no specific details
Initial state understood IS not understood	Initial problem state is clear and comprehensible Initial state confusing, cause-effect relations unknown
Assumptions agreed **A not agreed upon**	Agreement about assumptions → problem is well defined Disagreement → problem definition is difficult
Assumption explicit A not explicit	Assumptions are stated, made known, written down Assumptions not known, many possible frames for problem
Familiar **New pattern**	Problem is procedural, follows routines and precedents Problem is novel, needs creativity, imagination
Risk magnitude great Risk not great	Problem involves taking high risks Problem does not involve taking significant risks
Empirical analysis Not susceptible to EA	Problem requires empirical data or evidence Problem requires making judgment calls
Internal exposition External exposition	Problem is imposed from within organization Problem comes from external environment

Design intranet to address users' perceived Problem Dimensions

Well-structured → Templates for spreadsheets, reports, flowcharts,…

Ill-structured → Informal discussion, brainstorming with colleagues, customers

Simple → Project management tools to focus on deliverables, track progress

Complex → Collaboration spaces for cross-functional coordination, consultation

Assumptions agreed → Authoritative sources – industry norms and methods

Assumptions not agreed → Consultative forums – stakeholder dialogue

Familiar → Access to precedents; support workflows

New → Discussion boards to canvass ideas, Expertise locators to find advice, …

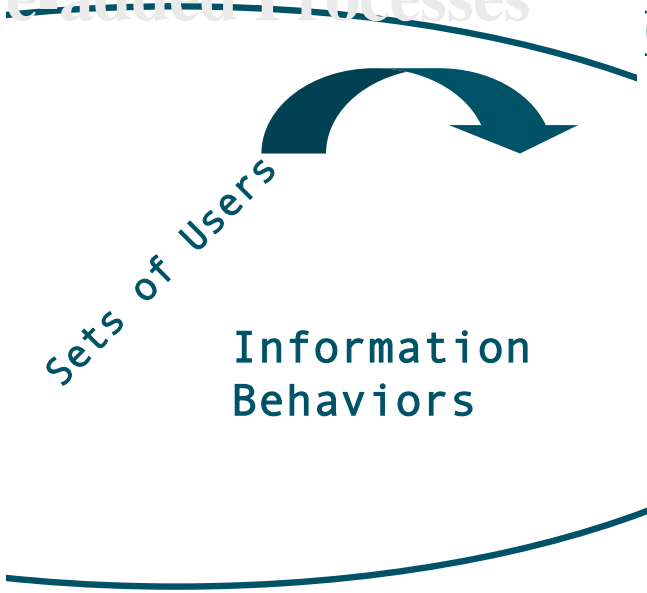
2.3 Information Use Environment: (3) Information Behaviors

What information sources do users access?

What information use outcomes are they trying to achieve?

INFORMATION SEEKING
Sources and Content

- Documents
- Databases
- People
- Projects
- …
- *Structured information*
- *Unstructured information*
- *Semi-structured information*
- …



INFORMATION USE
Outcomes

- Sensemaking
- Knowledge creation
- Decision making
- Task completion

Design intranet to support users' information seeking

Intranet search function	Intranet search remains major challenge Features to focus query or filter results Search performance to be monitored and tuned Use of metadata, tags, taxonomy improves search
Information about context	Include contextual information in search results (document purpose, author, project, department, status, …) → sensemaking
Authoritative sources	Quick access to authoritative information (policies, manuals, standards,…) → decision making
Recommendations Suggestions	Users or staff may contribute, tag, recommend or annotate content → knowledge sharing

Design intranet → desired information use outcomes

Sensemaking	Be aware of and understand significance of external trends, events: e.g., custom news feeds, commentary blogs Make sense of organizational actions and initiatives: e.g., dashboards, internal news, announcements, messages
Knowledge creation / sharing	Share solutions to problems: knowledge base, FAQs Transfer what is learned: best practices, lessons learned Find people who can help, advise: expertise locator
Decision making	Guidelines and checklists for structured decisions Decision aids: spreadsheets, flowcharts, decision trees Organizational memory → past decisions + rationales + outcomes

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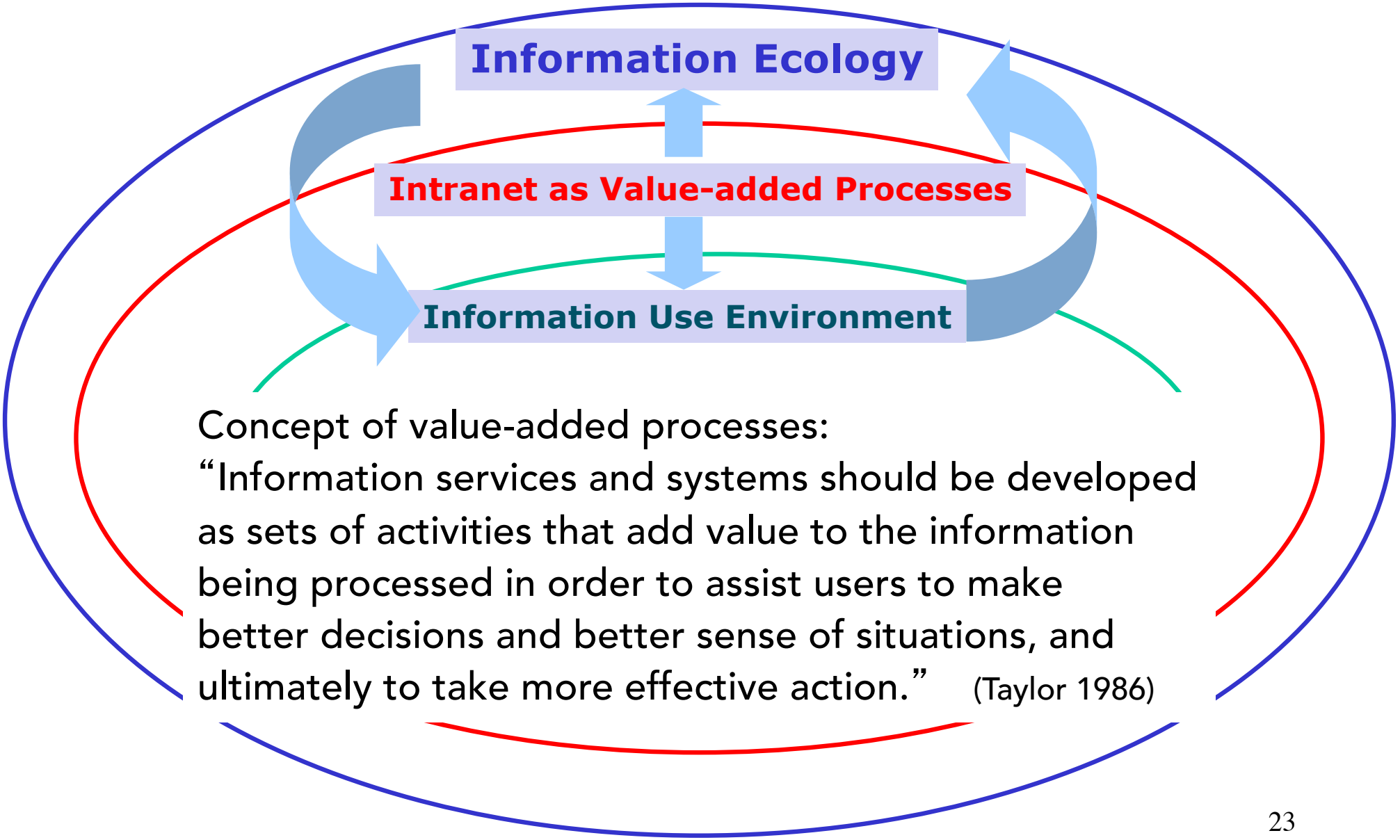
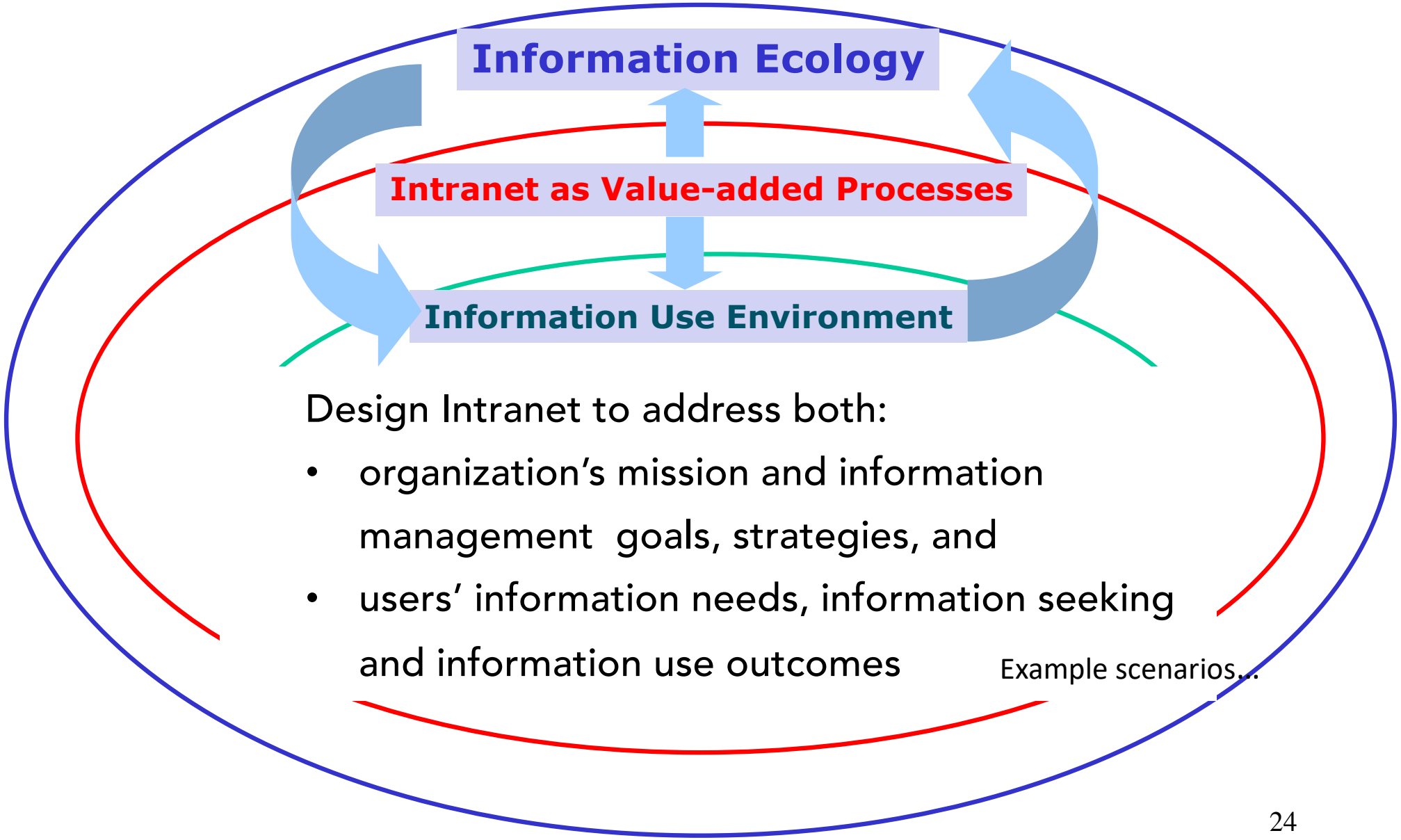
3. Designing Intranets as Valued-Added Processes



Concept of value-added processes:
"Information services and systems should be developed as sets of activities that add value to the information being processed in order to assist users to make better decisions and better sense of situations, and ultimately to take more effective action." (Taylor 1986)

3. Designing Intranets as Valued-Added Processes



Design Intranet to address both:

- organization's mission and information management goals, strategies, and
- users' information needs, information seeking and information use outcomes

Example scenarios...

Design intranet to meet user needs + organization goals

S1 - Design Intranet to improve ACCESS to information

- **Users**: Intranet provides single sign-in access to content from different sources, systems, departments
- **Organizations**: use Intranet to point to authoritative sources, to distribute new content, and to ensure content is current, accurate

Design intranet to meet user needs + organization goals

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S2 - Design Intranet to improve information and knowledge SHARING:

- **Users**: sharing becomes effortless and rewarding: spontaneous; receive feedback and recognition from colleagues, … *e.g., Xerox Eureka*
- **Organizations**: sharing becomes more extensive, more timely; possible to incentivize sharing; able to tap into collective knowledge

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S3 - Design Intranet to improve COLLABORATION

- **Users**: groups create and customize digital workspaces to collaborate; select tools for coordination, discussion, project management
- **Organizations**: retain and transfer knowledge gained in projects – lessons learned, best practices, … *e.g., MCP project binders → MODUS, CASE*

Summary of Intranet Design Principles

- Analyze organizations as information ecologies
- Recognize and manage stakeholder and information complexity
- Develop a detailed understanding of how users perceive their information needs and information use environments
- Address task-specific subject matter and task-related situational information needs
- Intranet should support organizational goals and address its information management challenges
- Intranet should help users access more efficiently and make use of information more effectively

Intranet Design Project

- **Assignment 2 requirements**
- **Project Workbook**

Optional:

- **Student project presentation example (OMERS Ozone)**
- **Annotated pages examples (Baker McKenzie and Ziedler Library)**

Intranet Design Assignment

Based on 2 major themes of the course:

- Intranets are an organizational information resource
  - Creating and managing an Intranet is a huge investment and a major opportunity for the organization
  - For an Intranet to be successful, it needs to be supported by an organization-wide framework for managing information
- Intranet design should leverage detailed knowledge about its internal audience

Purpose of assignment:

To introduce a framework to simultaneously analyze the information goals of the organization and the information needs of users, and to think of ways to design the Intranet that would align these two sets of goals