



ISO: intégration Web et gestion documentaire

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ISO Central Secretariat,
Geneva, Switzerland

Documation, Paris, March 2001



INTERNATIONAL ORGANIZATION FOR STANDARDIZATION

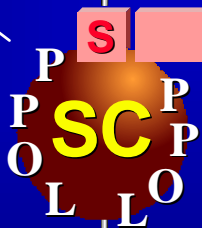
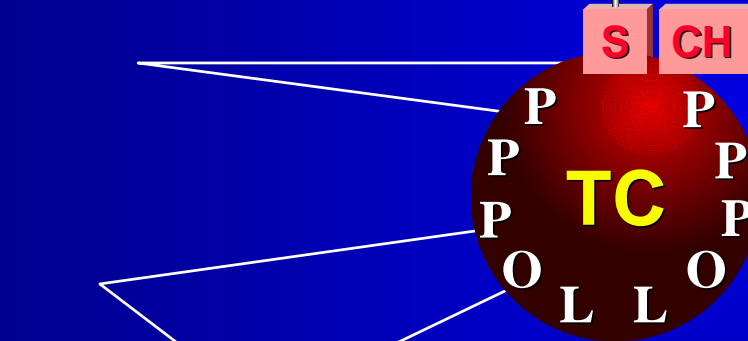




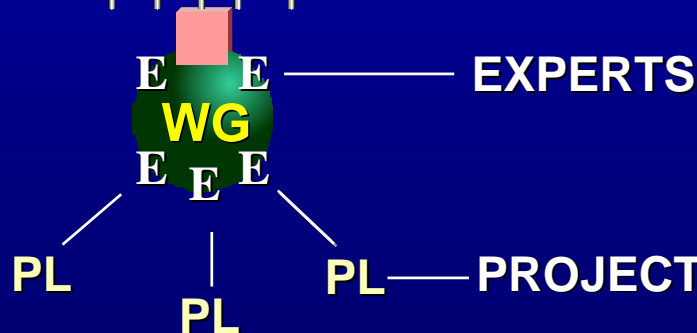
TECHNICAL COMMITTEES



ISO CENTRAL SECRETARIAT



MEMBERS

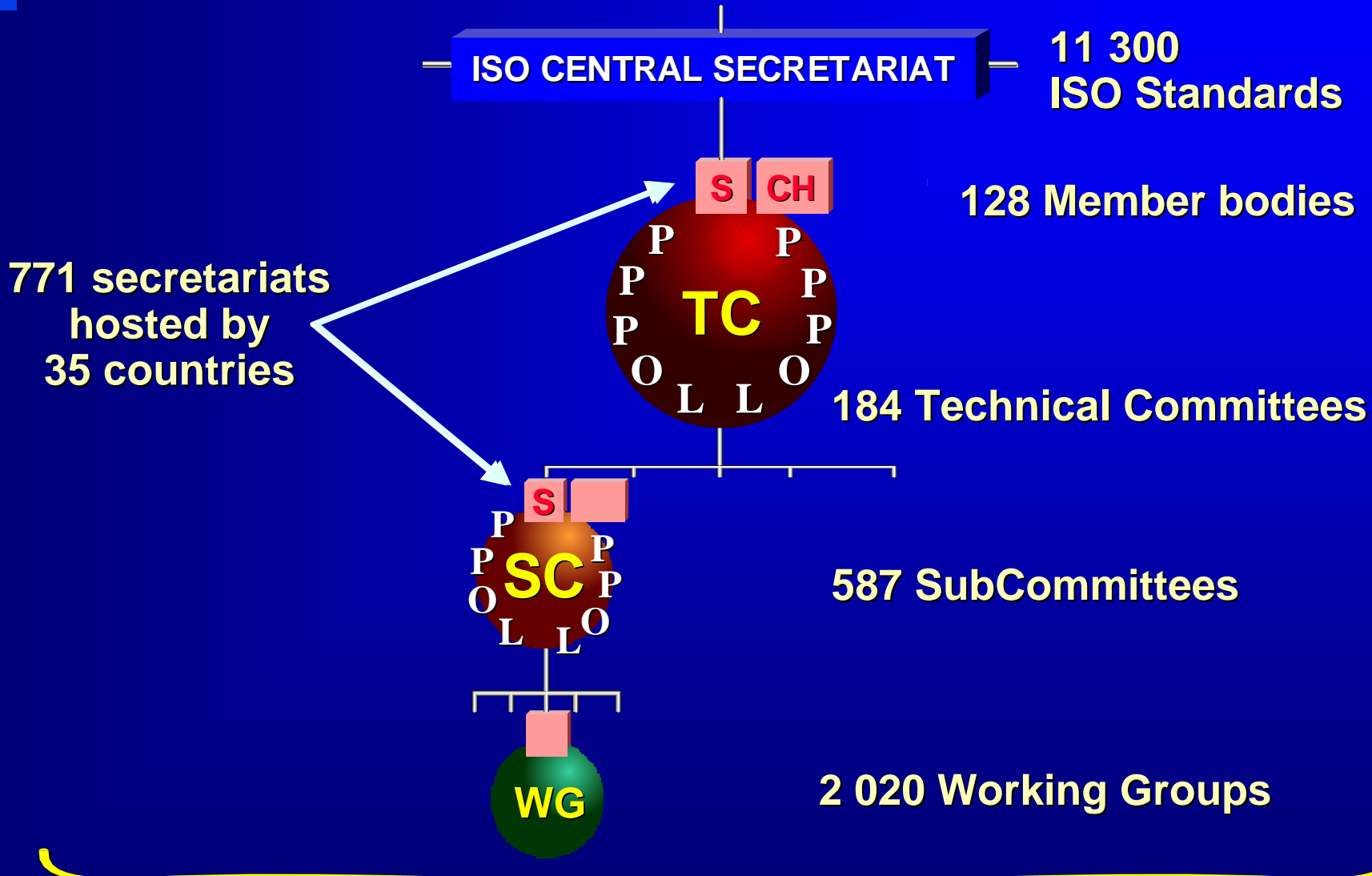


EXPERTS

PROJECT LEADERS



EXTENT OF ISO SYSTEM



771 secretariats hosted by 35 countries

Around 7000 active projects (~200 000 participants)



The Central Secretariat in Geneva

- Monitors development of International Standards, clarifies technical points with technical bodies, coordinates the document flow and the planning of meetings
- Edits and submits draft International Standards for voting, supervises balloting and publishes the resulting International Standards
- Supports and promotes the complete ISO system



DMS background

- Between 1990 and 1996: we were using a DMS in our office environment
- 1994: we started looking for a DMS for our production (publishing)
- Since 1994: we attended all Documation conferences in search of a solution



Great idea ... difficult users

- After Documation'96 we initiated the project “Feasibility study of a DMS for the ISO/CS”
- The main point: all functionality should be available from the Internet (to make available the same services to both internal and external users)
- ISO/CS internal users (about 150) were to select a system for many external users (> 10 000)



System requirements for the DMS

- The business requirements
 - DMS should facilitate distributed business processes

- The user requirements
 - The users do not know what they want until they “use it”

- The IT requirements
 - DMS must work in the current and future IT environments



The most important features for the DMS

- Integration with the main production tools
- Openness and connectivity with other IT tools
- Intranet / Internet capability and availability
- Support of SGML and compound documents
- Enable workflow and collaboration



The major dream of the IT department

- New DMS must be a tool for the users, an open system which can be maintained without a programmer's assistance
- The users shall be able to carry out administration, some customisation and maintenance tasks by themselves
- The users should feel ownership on the DMS



General approach for a feasibility study

- Do not trust what you read or hear (from glossy magazines and consultants)
- Believe only half of what you see (in demonstrations)
- Accept only what you can experienced (i.e. try it for yourself)
- Test vendors responsiveness in practice



Project milestones

- Definition of the system requirements for the DMS
- Selection of two vendors for further investigation
- Implementation of prototypes for selected ISO/CS applications
- Drafting of a recommendation for the final choice before the end of 1996



Interfaces for the ISO/CS

ISO policy development

General Assembly, Council, etc.

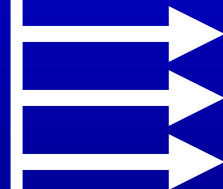


Technical groups



ISO/CS

Member bodies



General public



Standards development

Standards delivery

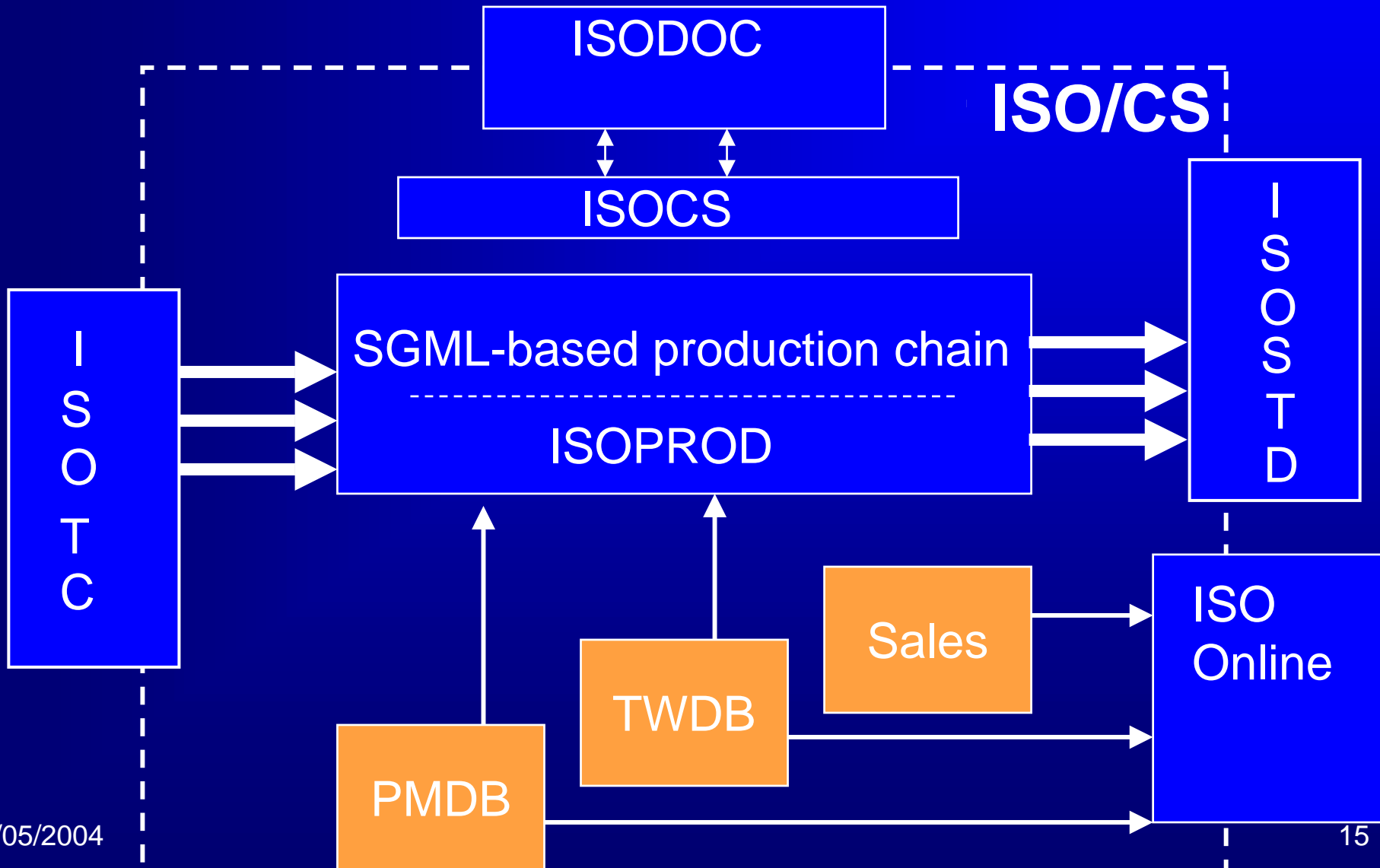


IT architectural principles

- Functional (or business process-based) decomposition of the system services to loosely connected components (e.g. DMS servers)
- Establishment of well-defined interfaces between these components, other IT services and external resources
- Use of workflow as the glue between the components of the system or within a component



Architecture of IT system at the ISO/CS





Advantages of using of many DMS servers

- Better fit to the real business processes
- Increase manageability
- Quicker deliverables — business agility
- Many users are more comfortable with their “own” DMS server
- Creates pressure to improve the IT infrastructure



Challenges of using of many DMS servers

- Need for consistency, i.e. determine and implement coherent decisions and solutions
- Parts of the system (DMS, database, OS, desktop, etc.) have to be systematically migrated to be compliant with a vendor-certified configuration
- Maintenance of the user community outside DMS
- Develop inter-DMS integration (exchange?) tools



LiveLink Intranet (LLI) servers: name, # users, volume in gB

- **ISOSTD** 100 53
Role: Published Standards store
LLI parts: Library, LAPI
- **ISODOC** 2 000 0,8
Role: Policy development collaborative tool
LLI parts: Library, discussion, workflow
- **ISOCS** 150 5,5
Role: Internal storage and ISO/CS quality system
LLI parts: Library, LAPI, workflow



LiveLink Intranet (LLI) servers (2): name, # users, volume in gB

- **ISOTC** 9 000 16
Role: Hosting of “intranets” for ISO workgroups
LLI parts: Library, discussion, project, LAPI
- **ISOPROD** 200 2
Role: Production storage and automation engine
LLI parts: Library, LAPI, workflow
- **ISOPORTAL** 10 0,5
Role: Official web-site infrastructure
LLI parts: Library, another (XML-based) interface



Ladder of collaboration

- Standardization process is a collaboration between people, applications and business systems
- The DMS provides a collaborative environment for distributed groups which have different needs
- There are several different patterns in the current configurations — the “steps” of the ladder
- Functionality may be added to respond to needs evolution



The “steps” of the ladder

- Classic web-site
- Project web-site
- Team dream-web-site
- Internet-based business system



Principles which could help to climb the ladder (1)

- Full administration and control by a group nominee
- Use of structural (user allocation) and functional (granting permissions) groups
- Connection to the Internet and an Internet Browser are the only prerequisites
- API is the preferable way to add extra functionality



Principles which could help to climb the ladder (2)

- Differentiate content between a known user, a self-registered user and a user from the Internet

- Implement for the Internet traditional (for OS) maintenance procedures such as:
 - service announcement,
 - urgent shutdown,
 - message that the service is not available, etc.

- Consider using a BSP (business service provider) model



No longer any serious technical problems

- First: design carefully the architecture of the system (“where” and “how” to use “which” technology or tool)
- Second: adapt the business processes to permit automation
- Third: move common information and tasks to the infrastructure, e.g. (re)design your corporate LDAP



Classic web-site

- One writer / manager and many readers
- Simple library with read-only access
- Possibly use of notifications
- Example: ISODOC



Project web-site

- One manager and many writers / readers
- Library with protected documents/folders to keep project-related information and documentation
- Task assignment (for advanced projects)
- Discussion (depends on group culture)
- Example: some internal projects at ISO/CS



Team dream-web-site

- Role-dependant functions and permissions
- Document management is good for ISO 9000 certification
- Typical business procedures (e.g. voting) are formalized and executed as workflows
- Some automation

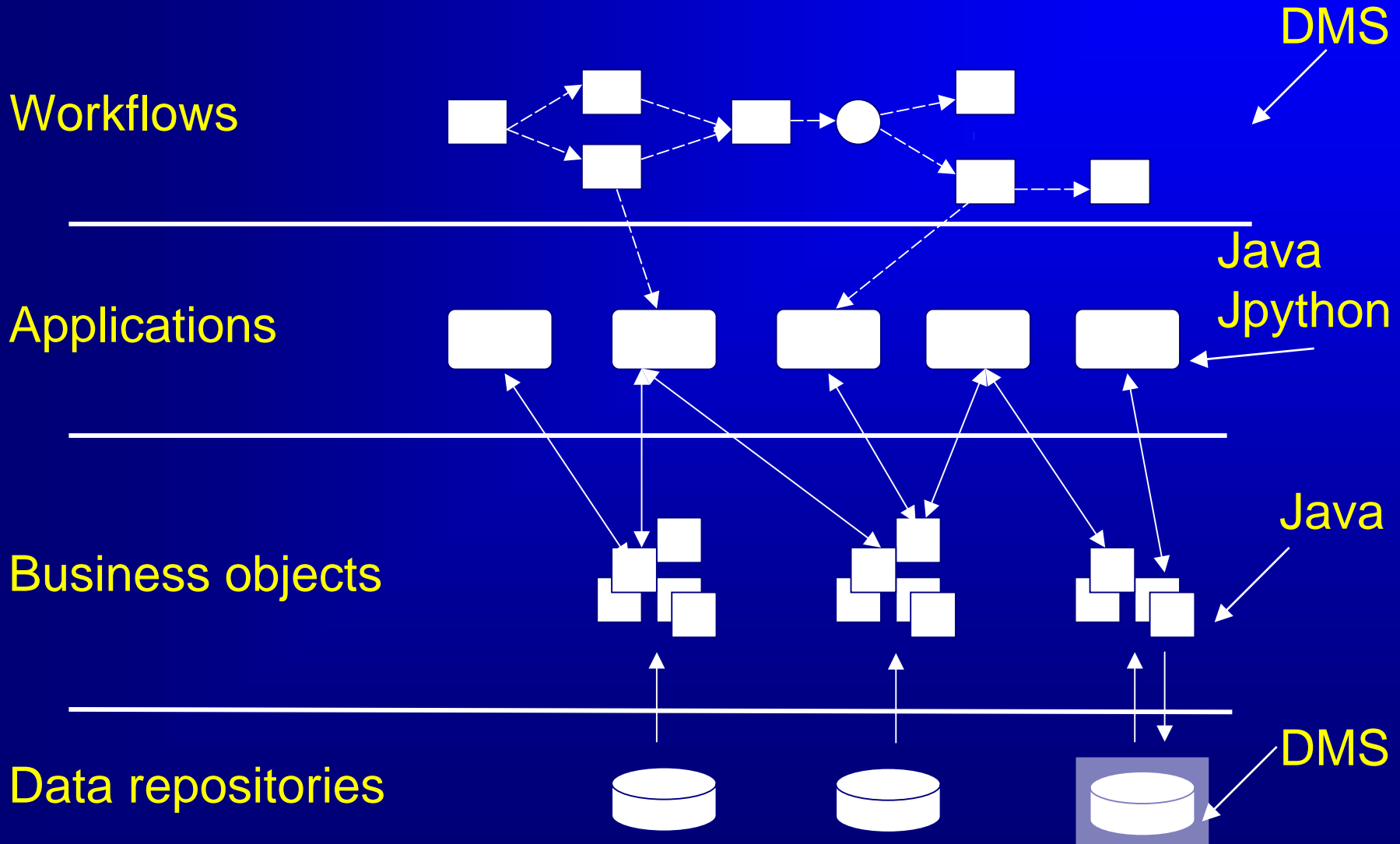


Internet-based business system

- DMS is an interface to the business system
- Workflow is the business process integration tool
- Access to centralized restricted information
- Integration with the existing applications



Business process automation architecture





Lessons learnt (1)

- Build **user ownership** of the DMS
- **Accept** user requirements — some of them may **disappear** later
- Deploy for **top management** first
- Check that your **infrastructure is ready** for the Web



Lessons learnt (2)

- Necessary to **migrate systematically** all parts of your IT system, but not everything at the same time
- Add **general-purpose functionality** to the system and convince the vendor to add it to the standard configuration
- Add **customer-specific functionality** to the system only using APIs



Lessons learnt (3)

- Automation requires a **high quality of service** from the IT infrastructure and other services — each recovery is too costly
- Automation **reduces** the cost of business practices (old and new). Exceptions complicate (and sometimes preclude) automation, and **increase** cost of automation