

12 September 2007

**AN
INFORMATION TECHNOLOGY
STRATEGIC PLANNING APPROACH
TO
UPGRADING/ENHANCING/REPLACING
THE LIBRARY'S
INTEGRATED LIBRARY SYSTEM (ILS)**

**for
Presentations at the
Lincoln Trail Libraries System
Symposium on the Future of Integrated Library Systems
September 13 - 15, 2007**

Planning for the Future

Rob McGee, RMG Consultants

Planning for the future of the Integrated Library System is a challenge that libraries face. McGee will provide information on how to effectively do this planning along with the variety of issues to consider.

Friday, 14 September 8:30 am – 9:30 am

Planning for the Future

Rob McGee, RMG Consultants

Planning is a key function of Library Governing Officials, but planning for Integrated Library Systems is a technical process. This session will help Governing Officials know what questions they need to ask and what they need to understand when purchasing or developing an ILS.

Saturday, 15 September 8:30 am – 9:30 am

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WHAT IS AN INTEGRATED LIBRARY SYSTEM? PAST AND FUTURE

- **What is an Integrated Library System?**
 - Concept defined at The University of Chicago Library in early 1960s by Charles T. Payne under Herman Fussler's Leadership
 - Project to Develop an Integrated Bibliographic Data Processing System for a Large Research Library
 - Centrality of Bibliographic Data
- **Today the ILS is the Library's Enterprise System for conducting operations**
- **Toward the Future:**
 - Beyond Bibliographic Data
 - Metadata for e-Resources
 - Integrating the management of e-Resources
 - Managing all Financial and Human Resources
 - Evolution into an ERP (Enterprise Resource Planning System)?
 - Today's ILSs manage only funds for content
 - Not for people
 - Do not include HR and Financial modules
 - Best-of-Breed Combinations vs. "Integrated Systems"
 - SaaS (Software as a Service)
 - Enriched Catalog Content
 - Federated Searching
 - Discovery Solutions
 - ERM (Electronic resource Management)
 - The ILS as a Service is gaining popularity slowly
 - Open Source ILSs are creating a Big Stir
 - Replicating the Databases and Transaction Files
 - Search and Discovery Systems
 - Data Warehousing/Data Mining
 - Business Intelligence (BI)
 - **Will ILSs become commodities?**

INTRODUCTION AND OVERVIEW

1 IT Strategic Planning Considerations in Planning and Procuring Next-Generation Integrated Library Systems (NGSs)

- See *RMG White Paper on Information Technology (IT) Strategic Planning for Libraries*, 17 June 2006, at www.rmgconsultants.com

This paper describes an approach to information technology (IT) strategic planning for libraries and institutions of higher education. Many of the principles described for IT Strategic Planning as a team-based enterprise learning process apply as well to the design and conduct of major IT procurements, where the organization also seeks best value IT outcomes for the long term.

Sample Library IT Strategic Planning Concepts and Language as a Framework for Planning and Procuring a Next-Generation Integrated Library System (NGS)

The Library's Strategic Directions for FY 2008 – FY2018

This Information Technology Strategic Plan for Upgrading/Replacing the Library's Integrated Library System (ILS) has been developed within the context of the Library's current strategic plan to:

-
- [5 or so Strategic Directions – or Goals -- are typical]
-
-

Preparing the Library for the 21st Century is seen as a major opportunity for re-defining Customer Services on the basis of enhanced and new uses of Information Technology that will improve delivery of both printed and electronic information resources to the customers and constituents.

The following ***Information Technology Strategic Goals*** have been defined for the Library in the first decade of the 21st Century:

- Enhance and maintain the Library's Information Infrastructure.
- Maximize Customers' access to analog (print-form) information resources.
- Maximize Customers' access to digital information resources.
- Establish technology-based strategic partnerships:
 - With other libraries: local, regional, national, global
 - In education, with schools, colleges, and universities
 - With cultural institutions
 - With area companies.
- Create and maintain learning environments in all Library locations.

2 What Problem are You Trying to Solve? Why Is ILS Upgrade/Replacement Required?

- To fulfill the Library's
 - Strategic Plan
 - IT Strategic Plan
- Perform a Needs Assessment to Define Why
- Desire for a "Next Generation Integrated Library System" – NGS?
- Current System Has Inadequate
 - Capacity/Size
 - Functionality
- Current System Cannot Be Maintained or Sustained
- Costs More to Keep Current System Than to Replace It

3 Conditions That Trigger Planning

- When Hardware Capacity is Reached
- When Manufacture of Hardware is Discontinued
- When Enhancements to Applications Software are Halted
- When Developments of New Applications Subsystems/Modules are Halted
- When Further Development of a Standard Operating System or Key System Software is Discontinued
- When Discontinuation of Maintenance Services is Announced
- When the Viability of System Vendor(s) Becomes Uncertain
- When System Growth Path is Determined to be Inadequate
- When Wanted Functionality is
 - Not Available
 - Not In Prospect
- When System Vendor Introduces a Follow-on Product that Supersedes Current Product

and particularly in 2007

- When Library is really, really upset with its ILS vendor
- When Library is distrustful of vendor
[Driving a lot of attention to Open Source ILSs]

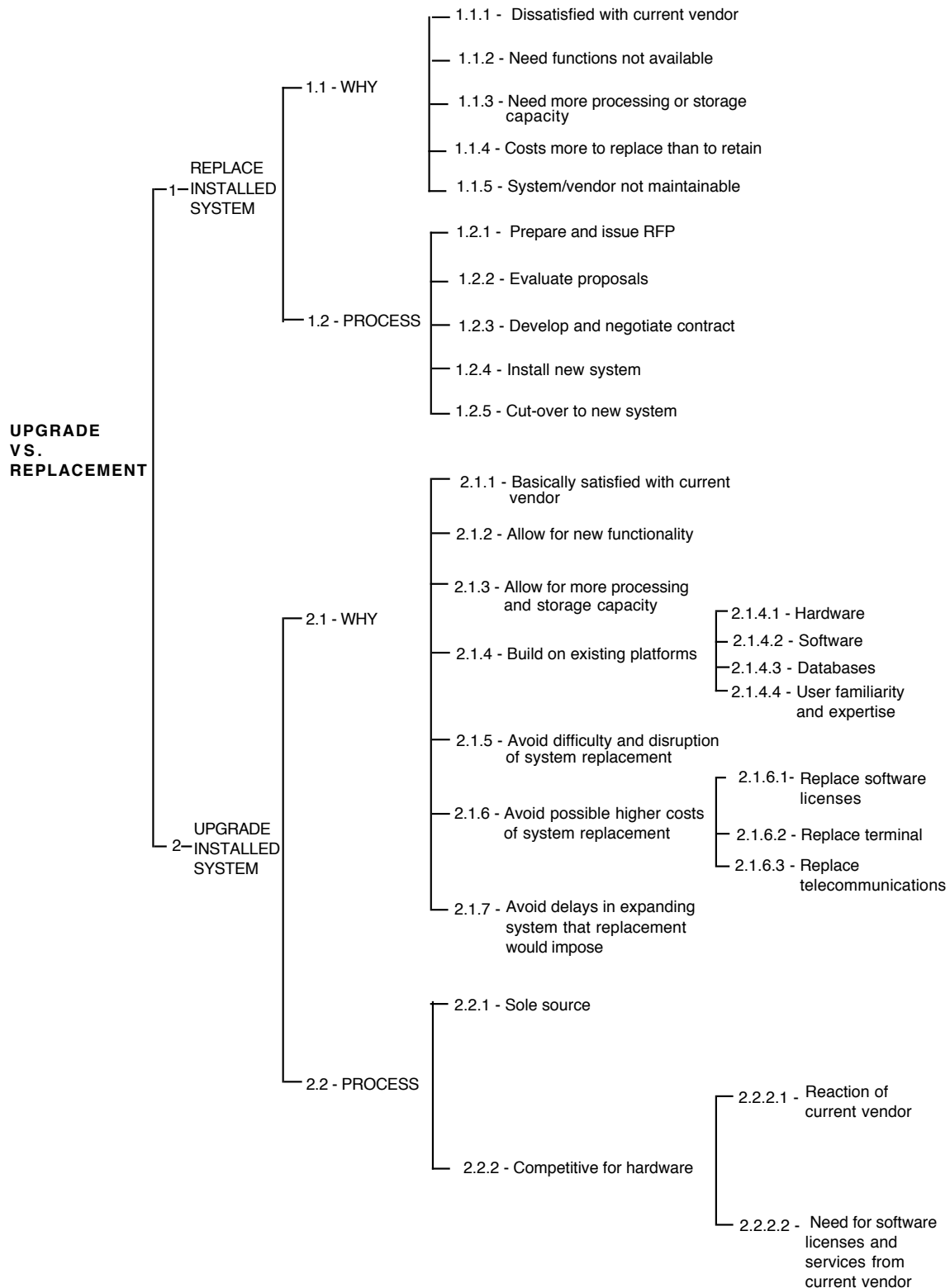
4 When Should Planning for Upgrade/Replacement be Done?

- Begin Process No Later Than One to Two Years Before Targeted Cut-Over
 - To Evaluate Situation
 - To Establish Need
 - To Develop Budgets
 - To Obtain Funds
- Plan, Design, Schedule the Project and Processes

5 Special Considerations

- Requirements to Implement Customizations of the Current System with the Next System
- Detailed Gap Analysis of Current System vs. Targeted System
 - This Encounters BPR (Business Process Re-Engineering) Issues
- Requirements for System Growth
- Upgrading/Replacing Locally-Developed Systems

6 Upgrade vs. Replacement



7 Why Turnkey Upgrades May Cost Less Than Replacement Systems

- Carry-Over of Software License
- Transfer (vs. Conversion) of Database
- Vendors' Marketing Considerations
- Simpler Contract Negotiations
- Lower Non-Vendor Costs
 - Less Training Of
 - Library Staff
 - System Operations Staff
 - Users
 - Administrative Costs
 - Procurement Costs/Time
- Increasing Costs of Software
 - Scaled To System Capacity
 - Per Library
 - Per Bibliographic File Loaded
 - For New Modules
 - For Custom Enhancements

8 What's Possible? Are There Constraints?

- Upgrade within a Given Operating System Environment or Compatible OS Environments
 - Unix vs. Microsoft
 - Institution's Preferred/Mandated Platforms
- Upgrades Within a Given Hardware Series or Compatible Series
 - HP vs. IBM vs. Dell
 - Institution's Preferred/Mandated Platforms
- Best-of-Breed Combinations with SaaS (Software as a Service) – Applications Service Provider:
 - Give a Life-Cycle Kicker by Grafting on Third-Party New Modules/Capabilities to an Old ILS, e.g.:
 - Enriched Catalog Content
 - Public Access Systems, e.g.:
 - Portals
 - Discovery Solutions (Aquabrowser, Encore, Primo, Endeca, etc.)
 - Federated Searching as a Service
 - ERM as a Service
 - Upgrade by Interfacing
 - Within a Given Vendors' Family of Products
 - Between Two or More Vendors' Products
- Replace One System with Another from the Same Vendor
 - New Hardware/Software Environment
 - New Hardware with Old Software
 - New Software with Old Hardware
- Replace Current Applications Software with Another Vendor's Applications Software, on Same Hardware
- Replace One System with Another Vendor's System
- Third-Party File Conversion
- Installation of an Interim System
 - With Products from a Second Vendor
- NGS with SaaS (Software as a Service, or ASP – Applications Service Provider)

9 Examples of Key Technical Issues in Replacing One Turnkey Library System With Another

- **Which Files are Transferred?**

- Bibliographic
- Holdings
- Patron
- Loan
- Acquisitions
- Serials
- Other

- **Parallel Operations?**

If/How Long, and at What Cost Must the Old System and New System be Operated in Parallel?

- Analyze key Issues in detail
- Answers to these points have significant cost consequences
- Resolve these and other technical matters during negotiations with the vendor of the next system
- Include understanding in the terms and conditions of contract with the NGS vendor

- **The value of an RFP (Request for Proposal for a Next-Generation Integrated Library System) and RFP process include:**

- Definition of the Library's needs and detailed, specific requirements
- Vendors' proposals in response to the RFP address the Library's requirements in writing
- In addition to Vendors' presentations, the Library can read, understand, compare, and evaluate proposals that are presented in a standard organization and format
- The RFP and Proposal may be included by reference as contract documents
- The RFP can define the procurement process, rules, and evaluation criteria for the Library and Vendors
- Can emphasize comprehensive assessment, objectivity, and openness
- Will help the Library to understand if competing ILSs are a commodities – or if there are significant differences among systems and vendors

10 Managing the Upgrade/Replacement Project

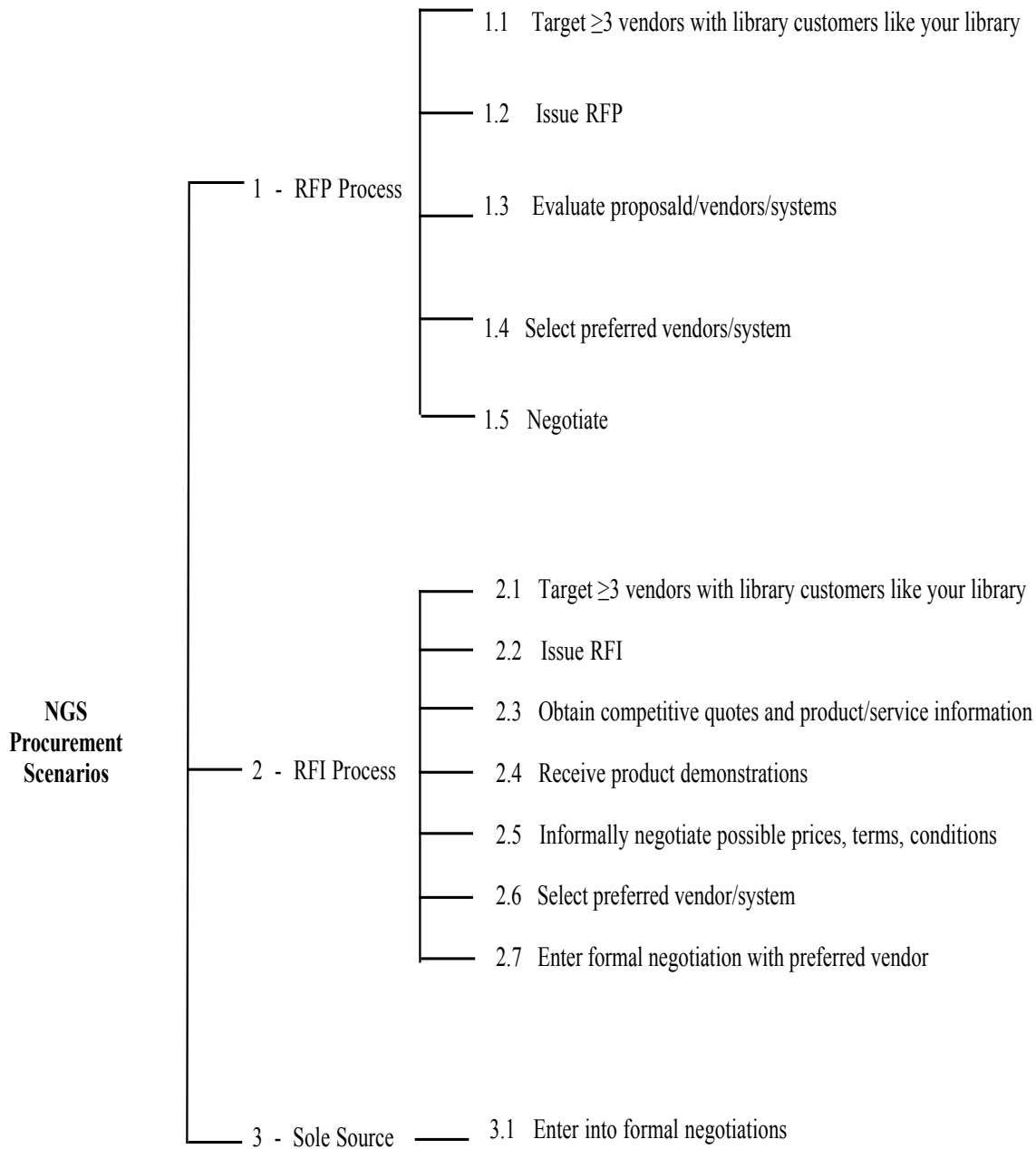
- Developing a Project Control Document (Project Definition Document)
 - Goals and Objectives
 - Project Organization and Staffing
 - Major Tasks and Timelines
 - Etc.
- Data And File Conversion
 - Files and Formats
 - Data Links to be Maintained
 - Bibliographic Database
 - Estimating Time Required
- System Staffing
 - Level of Expertise Required
 - Impact on Present Operations Staff
 - Training
- Transition/Cutover
 - Painless if Possible
 - Coordinating With Vendors, Utilities
- Planning for A Next-Generation System
 - SaaS
 - Linking Systems
 - Emerging Technologies
 - New Levels and Types of Services

11 Preparing the Organization for a Different Integrated System Environment

- Change Management Process?
- Changes in Public Service Departments
 - Circulation Points
 - Self-Service?
 - E-Commerce?
 - Reference Services
 - Social/Learning Space?
 - Second Life?
 - Public Access
 - New Interfaces
 - Federated Searching
 - Discovery Solution
 - Library Portal vs. Institutional Portal
 - Library Home Page vs. Institutional Home Page
 - Personalization and Personalized Services
- Changes within Technical Services
 - Selection
 - Ordering
 - Collection Development
 - Cataloging
 - Processing from Book Suppliers?
 - Management of the Bibliographic Database and Metadata
- Organizational Changes within the Larger Institution
 - Information Centers
 - Administration Of Information
 - Web Sites
 - Web Portals
- Supplementing Technology Personnel

12 NGS Procurement Scenarios: Buy and Negotiate Competitively !!!

- **Via an Evaluation Process and Methodology**
- **Using Evaluation Criteria**



BACK TO IT STRATEGIC PLANNING CONSIDERATIONS:

- **FRAMING THE CONTEXT FOR ILS PLANNING**
- **PROVOKING YOU TO PLAN FOR IT -- STRATEGICALLY**
 - **Comprehensively**
 - **Long-Range**
- **THE ILS IS NOT THE END-ALL AND BE-ALL**

Three Important Questions

- What are some new technologies for Libraries?
- What new technologies should My Library implement?
- Should My Library partner with other libraries to share new technologies?

New Technologies for Libraries

- From outside the Library Industry
- From within the Library Industry

How to

- **Prioritize**
- **Plan**
- **Budget**
- **Schedule**

**The Library's investments in technology
and**

Technology Implementation Projects

over the next

- **1-year**
- **3-years**
- **5-years?**

The Answer:

Library IT Strategic Planning

- And what about planning IT for 10-years?

Implementing Technology-Based Library Resource-Sharing and Collaboration

- Forming a Library Consortium
- IT Strategic Planning for Library Consortia

Topics for another day

FOR EXAMPLE,
HAS YOUR LIBRARY'S IT STRATEGIC PLANNING CONSIDERED THE IMPACT OF

- **Google Books**
 - As an icon of unrelenting e-content streams

- **OLPC (One Laptop per Child) and SONY e-Book Reader**
 - As harbingers of affordable, ubiquitous portable computing
and
reading & learning devices

- **iPhone**
 - As a precursor of easier-to-use interfaces
and
 - Really WOW devices

- **Gaming and Virtual Reality**
 - As paradigms of social computing and collaborative learning

- **Institutional Repository (IR) and Digital Cultural Heritage Libraries**
 - That emphasize the Library's role
in creating, preserving, and managing
e- content

- **RFID-Based Self-Service Solutions and Library e-Commerce Stations**
 - That emphasize the Library's ease-of-use, efficiency, and convenience

CONCLUSION

**DO YOUR ILS PLANNING
WITHIN THE CONTEXT
OF
LIBRARY IT STRATEGIC PLANNING**