Evaluation and Implementation of Vivarium Management Software

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Content

• Benefits of Vivarium Management Software
• Considerations for a successful outcome
• Implementation
• Deployment & Use
Vivarium Management Software

- Systems have been available for nearly 30 years
- More than 10 commercially available systems exist in the market today
  - Functionality & Integration capability varies by system
- Some institutes has developed in-house systems
- Technology advancements has enhanced functionality and accessibility of systems
- Client/Server or Web-based systems
Benefits of Use

• Improve research and research process
• Improve operational efficiency and communication
• Effectively manage thousands of animals each day
• Reduces/Eliminates paper based system
• Improve data integrity
• Find answers you need quickly
Considerations for a Successful Outcome

• Clearly identify your objectives / needs of a system
  – How should it improve your research process and research productivity?
  – How should it integrate your internal groups and processes?
  – What operational metrics or processes do you need to improve and why?
  – What are the current and planned federal and state regulations you need to comply with?
  – Strategic direction of your organization – 3-5 year plan objectives?

• Team approach with executive oversight and sponsorship
  – Steering Committee
  – Project Team – defined roles & responsibilities
  – Project Leaders – leader’s from functional areas
Considerations for a Successful Outcome

• Clearly defined project SCOPE
  – Level of integration targeted
  – Information / Data / Processes to be integrated across departments / groups
  – Information Technology to leverage, i.e. Hardware, Software, Programming Language, etc
  – Security – authorizations and level of access
  – Number of Users the system must support (both total and simultaneously users)

• Project Plan
  – Plan the work, Work the plan…
Project Team

- Key Individuals from Veterinary Services
- Power Users – staff that may use the system regularly
- Researchers
- IACUC Members
- IT Representatives (very important)
- May want to include Regulatory Affairs
- Appoint a Project Manager to be empowered to carefully roll out your plan
# Project Schedule - template

<table>
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<tr>
<th>Project week</th>
<th>Project phase</th>
<th>Name</th>
<th>Task</th>
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<td>User Requirements Specification</td>
<td>Approval of specs document</td>
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<tr>
<td>3 – 7</td>
<td>Planning</td>
<td>Functional Specification</td>
<td>Approval of specs document</td>
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<td>1 – 3</td>
<td>Planning</td>
<td>Project Plan</td>
<td>Approval of the project plan</td>
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<td>9 – 39</td>
<td>Implementation</td>
<td>Implementation Phase</td>
<td>Project follow up change requests management</td>
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<td>31 – 46</td>
<td>Testing</td>
<td>Testing</td>
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<td>47 – 52</td>
<td>Testing</td>
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<td>52</td>
<td>Roll Out</td>
<td>Deployment</td>
<td>Project closing</td>
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User Requirements Pre-analysis

• Key requirements
• Initial project scope
• Perform high-level product functionality mapping
Business Modeling

• Schedule preparation workshop sessions
• Develop process analysis and modeling
• Develop final user requirements
• Budgetary offer and preliminary customization workload
Benefits of Business Modeling

• Provides analysis of your business processes
• Compliance analysis of your needs
• Provides a clear scope of your needs
• Provides a cost and workload estimates
• Defines the deliverables
Preparation Workshop

User Requirements backlog → Preparation Workshop → Highest priority User Requirements = Project Scope

Project → Scope delivery

Updated User Requirements backlog → Preparation Workshop

First project

Second project
Customization to Fit Your Needs

- Preparation workshop (optional)
- Project scope and prioritization of user requirements
- Develop a final workloads and project plan
- Customized and tested software
- Configuration implementation
- Customization implementation
- Confirm a final project price
Change Management Process

Offer

Determines

Project scope

Phase 2, Specification

Milestone: Offer acceptance

Need to change scope

Functional and technical specifications

Milestone: Specification acceptance

Phase 3, Implementation

Milestone: Implementation according to specifications

Need to change specifications

Change management process

Implementation according to specifications
System Deployment

- Software installation
- Deployment planning
- Deployment consultation
- Training
- Acceptance testing
- Consider establishing a user group…
Deployment Phase

- Software Installation
  - Installation package creation
  - Installation support

- Deployment Planning
  - List of the site specific preparations
  - Wireless network
  - Devices, etc
  - Site specific deployment schedule
  - End-user training plan and schedule
  - Roles and responsibilities

- Deployment Consultation
  - Consultation and best practises

- Training
  - Train-the-trainer approach
  - Targeted to the customer's super users
  - Training material for customized solution
  - Training system preparation
  - 2-day on-site training with 2 trainers
  - Max size of the group per trainer is 6 persons

- Acceptance Test Support
  - Consultation
  - On-site support
Flow Chart the Various Phases...

PROPOSAL
- User Req. Specification (URS)
- Project Agreement

PLANNING
- Functional Specification (FS)
- Project Plan (PP)
- Master Test Plan

IMPLEMENTATION
- Technical Specification (TS)
- Test Cases
- SW Application
- User Manuals

TESTING
- Test reports

DEPLOYMENT
- Training Material
- Installation
- Training
- Acceptance Testing Support
- Deployement Planning & Consultation

C1 Project Agreement
C2 FS and PP Approval
FS Review
C3 Test Readiness Review
C4 Acceptance Readiness Review
C5 Acceptance Test Approval
Transfer to Solution Support
Plan the Work, then Work the Plan...
Other Considerations

• Review the processes that both contribute or hinder your success
• Know Your Vendor – build a good working relationship
  – What experience do they have?
• Vendor support of the system after the sale
• Mobility
  – PDA and/or Tablet PC
  – Wireless Capability
• Security of Data – Data Integrity
• Number of Concurrent Users
• Hardware Requirements – Server needs, Hosting requirements
Conclusions

• Careful consideration of your needs today and tomorrow (as best possible) is essential to controlling costs, managing scope creep, and meeting your project commitments (time, resources, etc)

• Executive sponsorship and a cross-functional project team are important attributes to managing “change” within your organization

• Frequent planning and communication meetings are central to keeping your project on track
  – Changes will most likely occur – compare against your project scope

• While the work involves a lot of IT matters, do not lose sight of the research and research processes you are trying to improve upon
  – Customization of a system around this aspect of your business is likely

• Thank You