Approaches to Legacy System Modernization

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MATHTECH, INC.
Clear Directions for Project Success
Approaches to Legacy System Modernization

Today’s Topics

- Why Legacy Modernization Projects are Complex
- Components of a Successful Project
- Best Practices

There are good reasons why projects encounter challenges. There are no good reasons for projects to fail.
About Mathtech – Background

Steven E. Young, PMP
- Computer Engineer
- Management Consultant
- Project Manager
- 18 Year Public Sector Experience
- Led Many Development & Modernization Projects

Mathtech, Inc.
- Strategy, Implementation, and Consulting services firm
- 50 years of history serving the Federal Government, States, Non-Profits, and Commercial organizations
- Strong reputation for successfully completing projects and working collaboratively with our clients
- Transformation & Implementation Experience
  - Motor Vehicles, Taxation, Education, Human Services
- Recent work with Depts. Of Revenue & Transportation
Why Legacy Modernization Projects Are Complex
Typical Legacy System Concerns

- **Outdated Technology**
  - Business rules are hard coded
  - 100% custom coding
  - Staff support skills dwindling

- **Maintenance & Expansion Issues**
  - Limited expandability
  - Minimal ability to cleanly support web transactions
  - No request is small
  - Limited documentation

- **Functional Issues**
  - Inflexible user interface and difficult to train
  - Reporting capabilities are limited
  - Security and audit functions are limited

- **Process Issues**
  - Definition-documentation-design processes is ineffective
  - Testing is informal in incomplete
Where Many Agencies Find Themselves…

Many agencies find that large system replacement projects are substantially larger and more complicated than typical projects.

- Opportunity for True Enterprise IT Planning
- Enterprise Need For New Technology Infrastructure
- Strategic Planning for Future Operations
- Avoid the Mistakes of Others
- Need to Move Quickly
Components of a Successful Project
Components of a Well Constructed Project

A failure in any of these areas can result in a project failure.
Goals & Vision

Any strategic project must be grounded in agency goals and a vision of the future system and operations.

- How will we operate in the future?
- What works well now? What needs to change?
- What can we learn from other jurisdictions?
- What can we learn from the private sector?
- What executive guidance do we have?
- What do our customers need or want?

Are all Stakeholders supporting this vision?
The Implementation Strategy must address all aspects of the project.

- Functional and Technical Vision
- People & Governance
- Project Approach & Expectations
  - Schedule & Phases – How long will this take?
  - Procurement – How will we procure services and technology?
  - Quality – How will we ensure we get what we expected?
  - Risk – What are the project risks?
  - Resources – Do we have the right skills and resources?
  - Scope – How much now and how much later?
  - Cost – How much will it cost and how will it be funded?
The agency must have a technology strategy that describes a path forward...

- COTS v. Custom implementations
- Risk Tolerance & Complexity
- SDLC Requirements & Expectations
- Coordination with Central IT Groups
- Core Technologies and Standards
  - Document Imaging
  - Database
  - Rules Engine
  - Java v. .NET
  - Financials
Data cleansing and migration is a complex effort that should start as soon as possible. External vendors are not likely to have the insight that internal staff will have.

- Future Data Requirements
- Data Cleansing
- Data Conversion
- Data Synchronization Across New & Old Systems
Requirements & Business Process

The agency must understand the functional requirements of the new system and the changes that will occur to the business processes.

- New web based transactions
- New tasks such as document scanning
- New approaches such as central or distributed processing
- Changes to business processes or coding schemes
- Legislative changes
- Impact on third parties

*Inclusion of business operations is critical in any project.*
People & Skills

Agencies often underestimate the impact of a large project on staff and the existing workload.

- Project Management Skills
- Visioning and Planning Skills
- Technical Implementation and Support Skills
- Technical Review Skills

Staff availability is always a challenge...

- Technical Participation v. Existing Projects
- Executive Participation v. Multiple Priorities
Governance

Changes to business processes or technology require communication and approval...

A strong governance structure is a forum for

- Reviewing,
- Assessing,
- Coordinating, and
- Approving Changes

Project Management is not the same as Governance

Executive Committee

Steering Committee

Oversight Committee

- Operational Directors
- IT
- Legal
- Finance
- User Group Sponsors
Best Practices
Where is Your Project In the Modernization Market?

It is important to understand the market of solutions before finalizing a modernization strategy.
Be Flexible

Unless you can predict everything that will happen in the next five years…

- Define your end state, be flexible on the path
- No “Big Bang” rollout
- No “One Big Contract”
Have a Strong RFP

The RFP is the single most important tool for creating a project that is…
- Well defined
- Designed for manageability
Acknowledge That You May Not Have Enough Staff

- Understand the need for advanced skills
- Backfill
- Get contract resources as necessary
- Cancel other projects
- Move slowly
- Identify Your Best Staff
Get Clarity On Your Current State

Your current systems & processes represent functionality that you must have…

- Business Rules
- Business Processes
- Current Systems

A Process Catalog is very capable tool for collecting and organizing process related requirements
Clean Up Your Data

- Understand new data requirements
- Clean and re-host current data
- Enhance your reporting and analysis
Assess/Fix Processes Before You Automate

- “Plan” changes and improvements
- Understand legislative, policy, & procedure changes
- Understand the impact of change on the new system
Stay Focused - Limit New Initiatives

- New demands on staff increase risk
- Difficult decisions must be made
- You can’t do everything
Set Up Strong Governance

- Include the entire organization
- Understand how change will happen
- Don’t expect IT to figure out everything
Final Thought – Planning for Success

Agencies are experts in the “As-Is”

To be successful, they need to be experts in the “To-Be”

Plus, they need to be prepared for the journey.
Contact Information

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