

Approaches to Legacy System Modernization

April 2016



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■ Outdated Technology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.

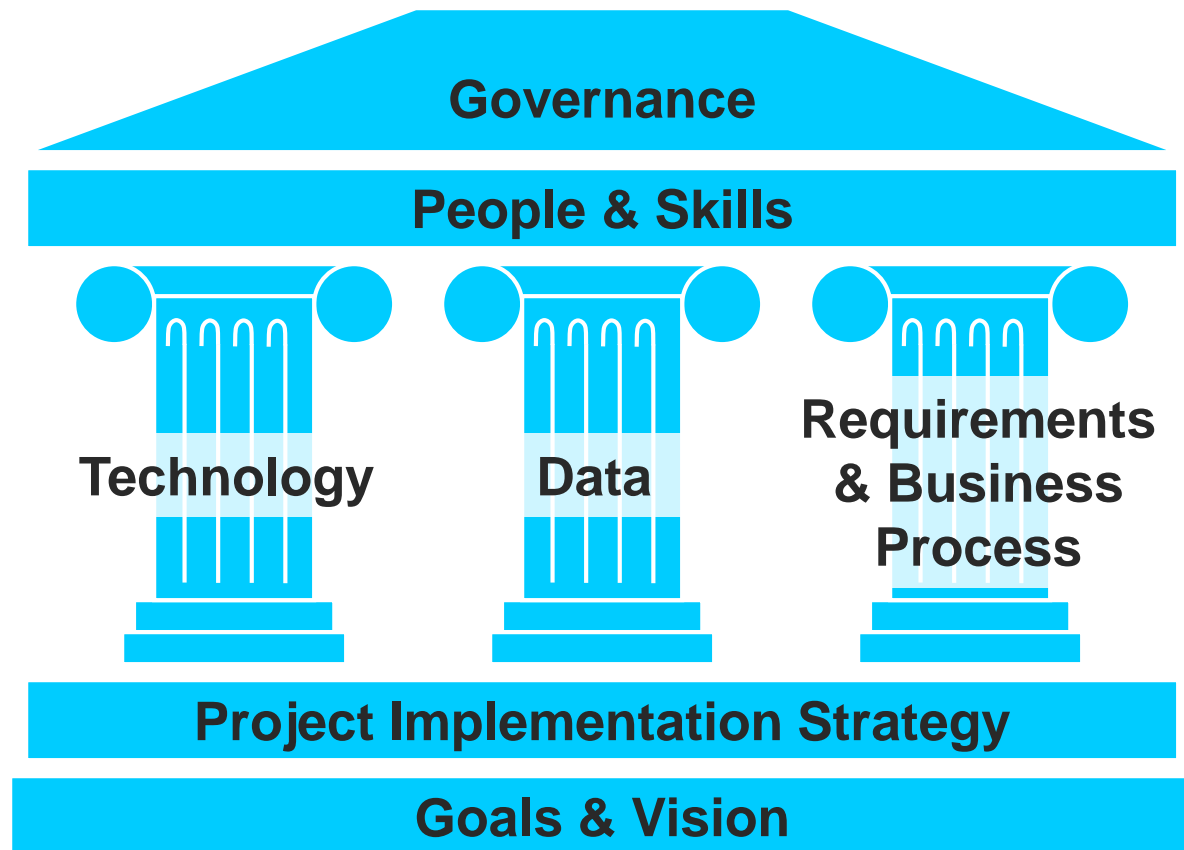
- Opportunity for True Enterprise IT Planning
- Enterprise Need For New Technology Infrastructure
- Strategic Planning for Future Operations
- Avoid the Mistakes of Others
- Need to Move Quickly



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?

Project Implementation Strategy



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?



Technology

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



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
- Business Operations Participation v. Daily Operations
- Executive Participation v. Multiple Priorities



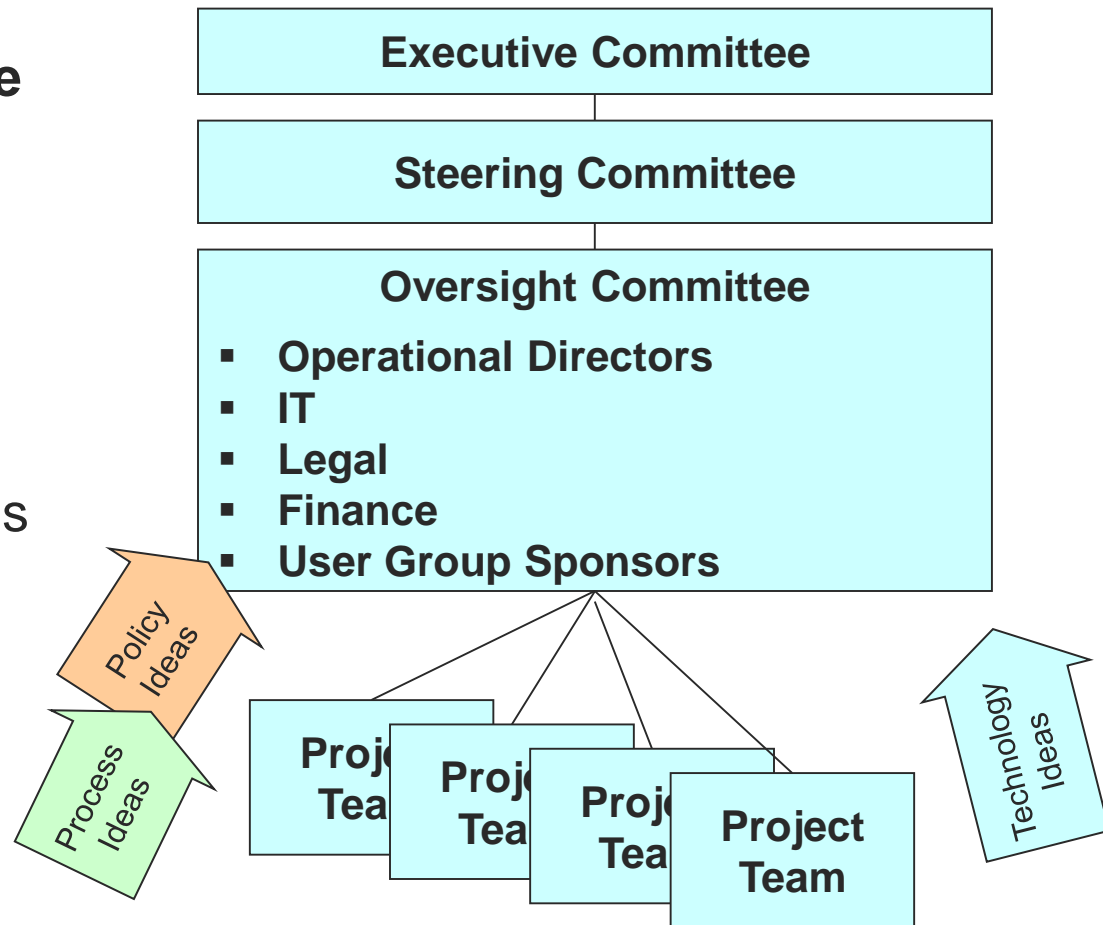
Governance

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

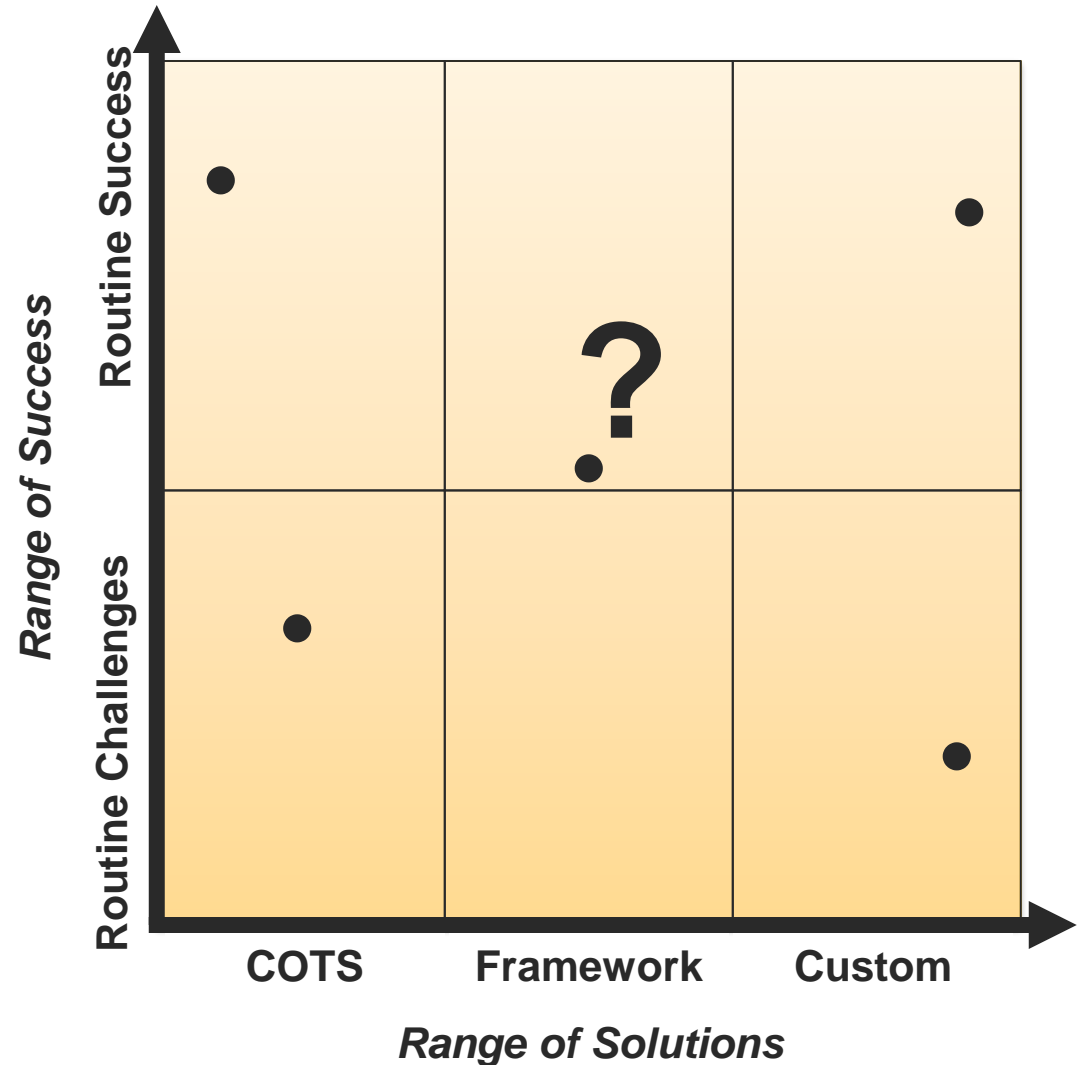




Best Practices

Where is Your Project In the Modernization Market?

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



Be Flexible

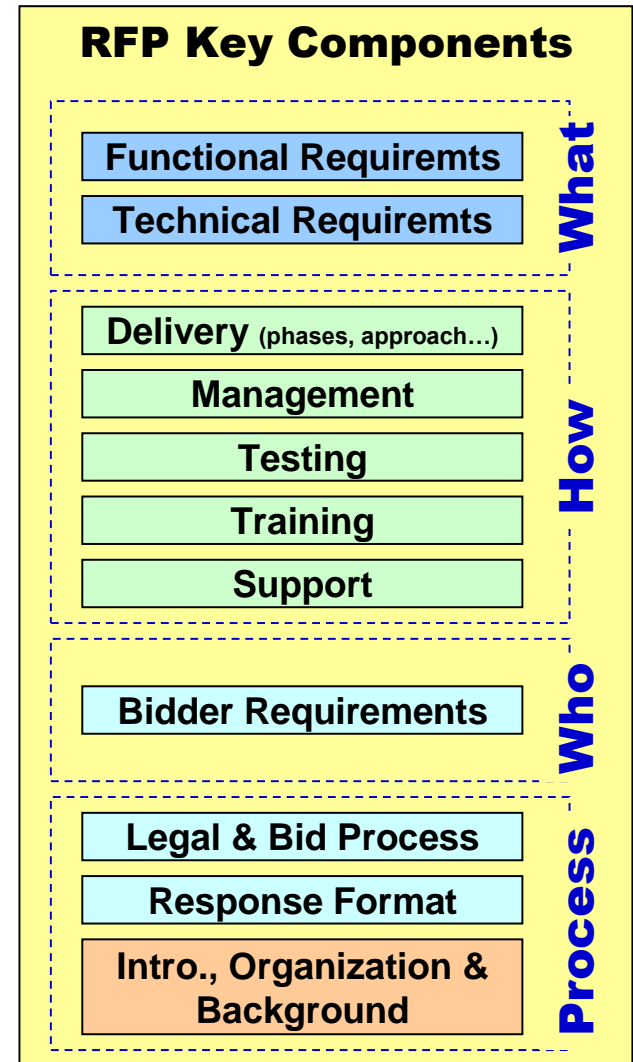
Unless you can predict everything that will happen in the next five years...

- 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

For more information regarding this presentation please contact:

Steven E. Young, PMP, Sr. Vice President
syoung@mathtechinc.com

Mathtech, Inc.
2465 Kuser Road
Suite 200
Hamilton, NJ 08690
Phone: 609-689-8520
Fax: 609-689-8505

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