Thoughts from the Front Lines of Implementing Technology — Are There Things We Could Be Doing Better?

L. Annette Foster
L. A. Foster & Associates, LLC
Who Am I?

40 years in information technology
MS CS UNC, MBA Finance UNC-G
Developer, Business Analyst, Designer, Project Mgr, Mgr, CIO

- **Software companies**
  - Developed products
  - Implemented software products in client companies

- **Business**
  - Implemented software in small and large organizations
  - Industries: retail, distribution, manufacturing, publishing, higher education, health care +

- **Consulting**
  - Deep business process knowledge
  - Focusing on aligning with business needs
  - Discovery Workshops and Agile method for business implementations
Story 1: The eCommerce Firm

- 12 B2B eCommerce modules
- Small teams
- Implementations
  - Fastest 15 days
  - Average 3-4 months
  - Repeated success over and over
- Our goal: Great references
  - Had to deliver the business value
- Motivation: Stock options
What Are the Problems I See

- Projects take too long
- Outcome is less than optimal in delivering business value

I think we have created some of our own problems (some, not all).

We could fix these.
Agenda

- IT folks don’t know the business
- How teams have changed over time
  - Dedicated to non-dedicated
  - Multiple roles to silos
  - Small team to large
- More projects underway at a time
Understanding the Business

Key success factor
- From CIO’s and CTO’s

IT folks are not interested in the business
- Would guess 90%+
- They love the technology

Would you entrust yourself to a doctor who was fascinated with the treatments but didn’t care if you got well?
Technology doesn’t exist for itself. It has a purpose to solve a problem, to facilitate something else.

We’re not creating technology we’re creating a business process.
Understanding the Business

Results in

- Better design
- Better coding/software selection
- Much better testing
- Better training and implementation
- Better delivery of the business value
  - which is the reason the project exists
Understanding the Business

Solution from a technology employee standpoint

- Share corporate goals
  - how their work supports the goals
- Motivate individual employees to be interested
  - Train them
  - I don’t see this being done. What are your ideas?

Solution from a project standpoint

- Discovery Workshop to start each project
- Agile method for business implementations
What is a Discovery Workshop?

Put **ALL** project stakeholders in a room for a day:

- Highest stakeholder tells why the project must be done (his neck is on the line)
- Develop a project goal
- Business benefits
- Measures of Success
- Constraints
- Risks
What is a Discovery Workshop?

- Review the current business process
- Design the new business process together including
  - Rules and policies
  - Technology
  - Resolving problems

Agile for Business Impl.

Iteration 1:
- 2-6 weeks

Iteration 2:
- 2-6 weeks

Focus Group 1
- Develop

Focus Group 2
- Develop
- System Test

Internal end-user

External end-user

Discovery Workshop

Production
Estimate by Business Function

Estimates

Discovery Workshop

Focus Group 1

Develop

Focus Group 2

System Test

Production
Estimate by Business Function

- See cost of a business function and weigh vs benefits.

- Business picks and chooses what they want to afford
Agenda

- IT folks don’t know the business
- How teams have changed over time
  - Dedicated to non-dedicated
  - Multiple roles to silos
  - Small team to large
- More projects underway at a time
The Old Old Way of Implementing a System

- Me -- dedicated
- Interviewed the users, resolved differences in need
- Designed the system
- Wrote the software
- Tested
- Trained the users
- Implemented
- Managed the project
“Since software construction is inherently a systems effort—an exercise in complex interrelationships—communication effort is great, and it quickly dominates the decrease in individual task time brought about by partitioning. Adding more men then lengthens, not shortens, the schedule.”

The Mythical Man Month, Frederick P. Brooks, Jr., 1975, p.19.
The Old Old Way of Implementing a System

- No longer realistic
- Technology is more complex
The New Way of Implementing a System

Team Characteristics
- Not dedicated
- Silo’ed
- Large
- Matrixed
- Motivated?

Team Members
- Project Manager
- Business analyst
- Designer
- Developer
- Testers
- Trainers
- Infrastructure
- Users

Many projects underway at same time.
In *Quality Software Management: Systems Thinking*, Gerald Weinberg proposed a rule of thumb to calculate the waste caused by project switching:

![Bar chart showing working time available per project and loss to context switching as the number of simultaneous projects increases.](chart.png)
Not Dedicated vs Dedicated

- Each person is less productive
- Increases team size
- Slows project

Solution: Dedicated team members
- Try to change the culture
- Try a pilot
Story 2: Business Process Reengineering

End-to-end process crosses employees/departments

Miscommunications/problems/delays found at the handoffs from 1 department/1 person to the next

Operating as separate silos

Example: Procurement

- User Department
- Requisition
- Purchasing Dept.
- Packing Slip
- Receiving Dept.
- Invoice
- Accounts Payable in Finance Dept.
Silos vs. Multiple Roles

Implementing IT Systems is a Process

Crosses specialists within IT
Operating as separate silos

Miscommunications/problems/delays found at the handoffs from 1 specialist to the next

---------------------------Project Manager---------------------------

Business Analyst  Technical Architect  Developers  QA  Users & Trainers  Support

Requirements Definition  Analyze  Design Specs  Develop  System Testing  User Accepts & Implements  Production

Copyright L.A. Foster & Associates, LLC  2015
Silos vs. Multiple Roles

- Specialization of roles
- Many PM’s have never worked in IT
  - They just manage “the project”
  - How can they really know the workload they are managing?
- Developers won’t do analysis or test
- Business analysts have never coded and do not want to become a PM
Silos vs. Multiple Roles

There’s less evolution or promotion from one role to the next

- Losing the accompanying knowledge of what the other team members are doing
- Limits career path

- Problem solving is less efficient
- Increases team size
- Slows project
Silos vs. Multiple Roles

Possible Solutions For IT

- Look for folks with >1 role
- “Encourage” them to learn >1 role
  - What is the incentive?
  - Take the time to train them
- Make everyone test

Solution for Users

- Discovery Workshop and Focus Groups
Large vs. Small Team

- Piling people onto the team for political and other reasons

Solution (if you can)

- Create a corporate culture to have small dedicated teams with team members that play multiple roles
- Break large teams into subteams by business function
- Have a Core Team and an Extended Team
Core and Extended Team

Extended Team

Core Team (Workers)
Many Projects Underway Simultaneously

- At Robins Air Force Base, in Georgia, < 50% of planes were being repaired on time by a contractor.
- Consultants recommended working on fewer planes at one time.
- A year later 97% were repaired on time.

Workplace Distractions: Here's Why You Won't Finish This Article, Wall Street Journal, Dec. 12, 2012
To Summarize: Ideally

- Smaller projects
- Fewer simultaneous projects
- Small, dedicated, motivated teams
- Use Discovery Workshops and Agile for business implementations to keep the project aligned to deliver the desired business value

Are you in a position to try this?
Questions??

L. Annette Foster
L. A. Foster & Associates, LLC
annette.foster@mindspring.com
919.623.4947