

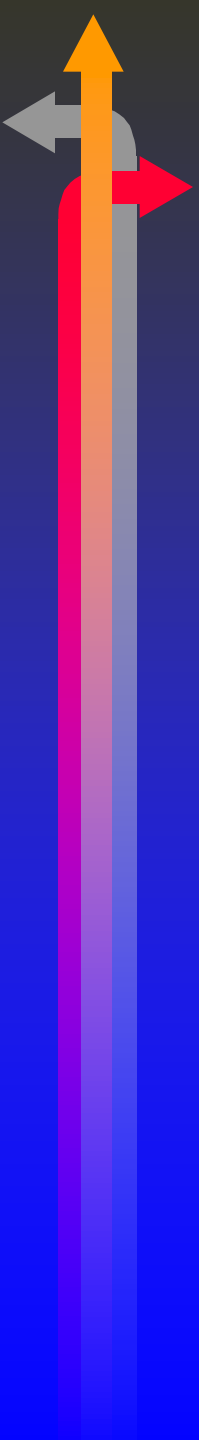


Systems Development and Implementation:

**We are Systems Analysts, We are Vendors,
Above all, We are a TEAM**

Eun-Shim Nahm, PhD, RN; Frances Spivak, RN, MS;
Linda McCauley, MS, RN, BC

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Introduction



Implementation

- Complex process involving various team members
- Occurs under time and resource constraints
- Things do not work as they were planned
- Things change (e.g., regulations, updated versions, staff change, etc.)

→ **Stressful and intense process!**



What are the business drivers?

Do it before the next fiscal year!

Select what?

All we need is a vendor to solve our multiple HIS woes

City General is doing it - We have to keep up

It will force us to become an Integrated Delivery System

It's in my annual management objectives

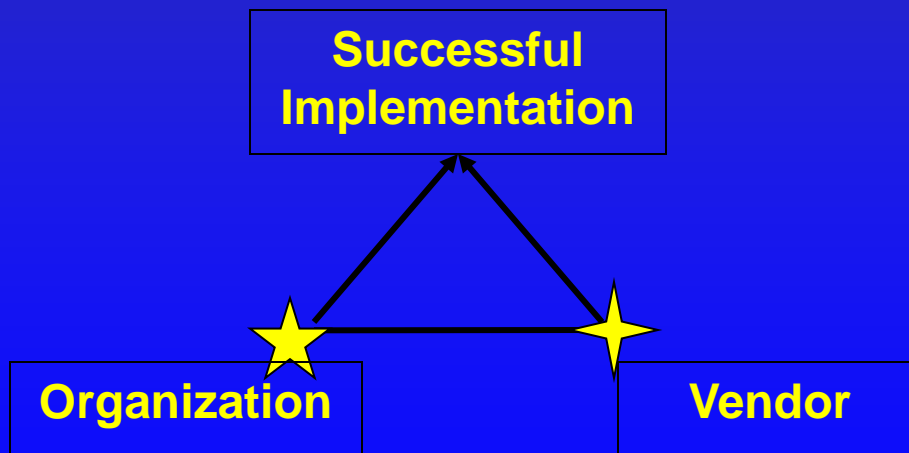
It will help us track our charts

patients will love us
Our staff and

The Devil made me do it

Common Goals

- Successful completion
- On time and on budget for both the organization and the vendor
- Both parties are coming from two very different cultures and company goals



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Common Goals

- Collaboration
- Negotiation, and if needed,
- Compromise of own goals for the Common Goals!!

→ Long-term business relationship



Implementation Team

- The team must include representatives from the vendor and the organization.
- The vendor and the organization possess very different cultures and values.
- The team members have little time to get acquainted each other as team members

Collaboration between the two parties is critical. However, team members may not understand where each others are coming from!



Problem

- The mindset of “Us” vs. “Them”
 - What methods can be used to facilitate collaboration between team members.
- Little research has been done in this field.



Purpose / Objectives

- **Purpose**

Using a real life example, an expert panel will discuss strategies for successful collaboration between the vendor and the healthcare organization

- **Objectives**

- (1) Define business process/workflows at the customer level that a system must support
- (2) Customer responsibility to validate business process/workflows
- (3) Vendor responsibility to develop the system in collaboration with the customer
- (4) Pointers to develop and support successful vendor/customer collaboration



The Customer's Responsibility

Linda McCauley, MS, RN, BC

Senior Application Specialist

Washington Hospital Center

Washington, DC



Common Misconceptions

- One size fits all
 - If it worked at XYZ Hospital, it will work here...
- We know our business processes inside and out, we can skip that step...
- We have one, simple workflow...
- Our policies and procedures are good – everyone always follows them...
- Look, don't worry about workflow, we really need to focus on the system configuration...



Before an Implementation...

- Several things need to happen:
 - Needs assessment/analysis
 - Learn about what you do, what you need
 - Group work is needed
 - Task Force, selection committee, project committee, etc
 - » Key players should be included to help identify needs.

Initial analysis is as important as project leadership.

(Sengstack & Gugerty, 2004)



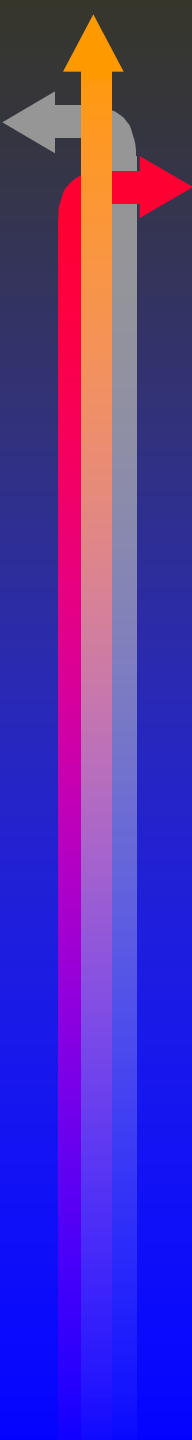
Before an Implementation...

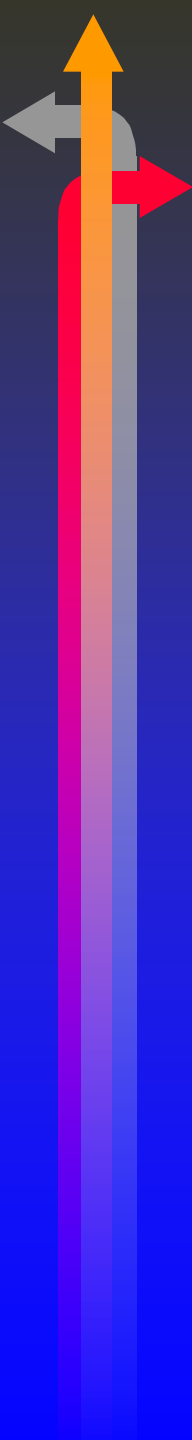
- Work Flow Analysis
 - 30,000 foot view vs. the ground level view
 - Who does what?
 - What is impacted?
 - What inputs are happening?
 - What is the outcome/output?
 - Discover the layers
 - Are you working in silos or in a cohesive unit?
 - Are you doing duplicate work?

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Above all, know thyself...

- Have the right people at the table.
 - “Aces in their places”
 - The people actually doing the work in addition to management.
- Know the workflows that make up your business processes.
 - Most processes can be broken down into smaller parts.
 - Find out who is doing the work.
 - Find out what is needed to have the right output.
 - Not a single work flow, but rather multiple ones:
 - » Parallel or intersecting
 - » Duplicate

- 
- Look at what you are doing
 - Why do you do it that way?
 - Legal requirements
 - Best Practices
 - Ritualistic
 - » But we've always done it that way!
 - How are your processes/work flows?
 - Are they sound?
 - » Great job!
 - Are they broken?
 - » Now is the time to re-tool.
 - Bad work flow will not translate well/at all in an automated system. Fix the process, don't expect the vendor to "tweak" their software because of "bad" processes.



Work flows with end user needs analysis determines user satisfaction, which in turn, determines project success. (Souther, 2001)



Integrating Technology into Work Flow

- What barriers are there that will hinder success?
 - Environmental
 - Technical
 - Physical
- Your Committee should seek these out and address these issues.
 - Find ways to fix/address these prior to implementation, if possible, or be aware of the risks they present.
 - Work with the vendor to address these prior to implementation.



Integrating Technology into Work Flow

- What do your policies and procedures have to say?
 - Review your policies and procedures
 - » Are the rules followed? Why not?
 - » Do your Policies and Procedures need revision or enforcement?
 - Broken or inefficient procedural conduct will come to light when an automated system is implemented.

Implementation can force strict and literal Interpretation of policies, rules and procedures.

(Anderson & Stafford, 2001)



Embracing Change...

- Several Steps
 - System/Needs Analysis
 - Integration between ancillary systems
 - Work Process analysis and Redesign
 - Review of Organizational Culture
 - The key players need to support and embrace needed changes.
 - Without adequate support to work through the organizational culture and dynamics surrounding an implementation, the likelihood of success is much lower.

(Sengstack & Gugerty, 2004)



Leadership

- The Facility should assign a qualified person with IT implementation skills to interface with the vendor before/during/after an implementation.
 - They can help tease out the needs, working with the vendor to configure the system or oversee project consultants and/or staff.
 - They can coordinate implementation team members and domain experts charged with the implementation.
 - They must be able to consider how changing work flows will impact the overall project timeline.



Managing Expectations

- Buy in is the crucial ingredient for system success
- Broken manual processes translate into broken, expensive automated processes.
- No system works perfectly “out of the box”
- There will be growing pains. Keep up the lines of communication.
- There will be a knowledge deficit – don’t ignore!
- Leverage where you are with where you want to be, and know that it will take some time and effort, but stay at it.
- Know your processes, and be able to relate them to your vendor.
- Don’t be afraid of change. Find the best practice, embrace it and keep going.



The Vendor's Responsibility

Fran Spivak, RN, MS

Software Product Analyst & Soarian Clinical Systems
SIEMENS Medical Solutions - Health Services



Software Implementation

Implementing software is analogous to cooking with a list of ingredients but without the recipe

(Sabherwal & Robey, 1993)



Challenges

- Multiple Actors
- Dynamic Phenomenon – people, time, requirements
- Managing factors influencing implementation and interrelationships between them
- Defining success



What determines a successful implementation?

- Success of a system is determined by the value it brings to end users and other stakeholders
- How do you define success
- How do you measure success



Customer-Vendor Relationship

- Impacts the success of a project
- Customers and Vendors share common goals
 - Delivering a system that satisfies our customer's requirements for a quality system, delivered on time and within budget
- Achieving goal requires teamwork to
 - Capture user requirements
 - Validate requirements
 - Monitor the process of fulfilling the requirements



Customer-Vendor team

- Manage the relationship between our implementations strategy, businesses processes and technology
- Process is impacted by requirements management
- Desired outcome
 - High quality
 - High user satisfaction
 - High system use



Requirements Management

- Business and technology requirements of users
- Influenced by user participation
- Requires understanding of the business processes you want to support with the technology and the technology itself – processes it was designed to support

How do we fulfill Users' Requirements?

DILBERT

BY SCOTT ADAMS

I'LL NEED TO KNOW YOUR REQUIREMENTS BEFORE I START TO DESIGN THE SOFTWARE.

E-mail: SCOTTADAMS@AOL.COM

FIRST OF ALL, WHAT ARE YOU TRYING TO ACCOMPLISH?

I'M TRYING TO MAKE YOU DESIGN MY SOFTWARE.

I MEAN WHAT ARE YOU TRYING TO ACCOMPLISH WITH THE SOFTWARE?

I WON'T KNOW WHAT I CAN ACCOMPLISH UNTIL YOU TELL ME WHAT THE SOFTWARE CAN DO.

7-21-04

TRY TO GET THIS CONCEPT THROUGH YOUR THICK SKULL: THE SOFTWARE CAN DO WHATEVER I DESIGN IT TO DO!

www.dilbert.com

CAN YOU DESIGN IT TO TELL YOU MY REQUIREMENTS?

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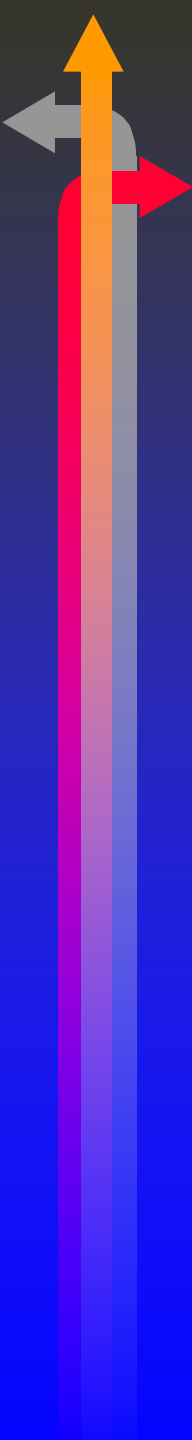
Challenges

- Complexity of information needs of users in healthcare
- Tendency to be focused on the task or data vs the goal of supporting a workflow or business process
- Communication between customers and vendor team



Strategies

- Accurately communicating customer requirements
- Participation in requirement definition process
- Participation in the software development process
- Customer-Vendor links

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Real Life Examples of Customer-Vendor Links



Specific strategies to develop and support successful vendor/customer collaboration

Eun-Shim Nahm, PhD, RN

University of Maryland School of Nursing



Communication

- Team building strategies at the beginning
 - Allocate some time for the two parties to meet face to face and get acquainted
 - Share information and expertise
 - Keep an open-minded attitude
 - My way may not be the best way!
 - It may be time for change for the better



Communication

- Teamwork
 - Collaborate from the beginning
 - Invite the other party to develop important documents (e.g., development of workflow process or an upgraded version)
 - Ownership of the work by all team members
- Clear and effective communication channels
 - Use both verbal and written documentation
 - Policies and procedures: who, when, what, chain of command
 - One representative from the organization and one from the vendor must be in charge of handling, documenting, and following-up.
 - An electronic program will facilitate this process.



Clear Expectations and Responsibilities

- Expectations and responsibilities clearly communicated and documented (i.e. average human-beings do NOT possess telepathic ability.)
- Regular team meetings
- Review of the issue log as a group

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Ownership of the Project and the Team

Table 1. Existing thoughts and Recommendations

	Existing	Recommendations
	Our project, not yours.	Yes, our project! (organization and vendor)
	Us and Them	We!
	Why can't? Just do it.	Let's discuss to find a way.
	It's your fault.	Why did this happen? Who is responsible? How can we prevent this from happening again?
	That's not our problem!	Let's see how we can help?
	I do not need to be there!	Do you want me to be there?



Conclusion

- Identification of the work (business) flows and the requirements for those processes and technology is critical to the success of a project.
- The vendor and the organization must collaborate to identify optimal processes (NOT just existing processes) and requirements.”
- A new collaborative culture is needed in the healthcare information technology arena -- open-mind, fresh eye.
- The organization and the vendor are the team. It's “WE” not “They.”



Questions and Answers