Introduction to a Requirements Workshop

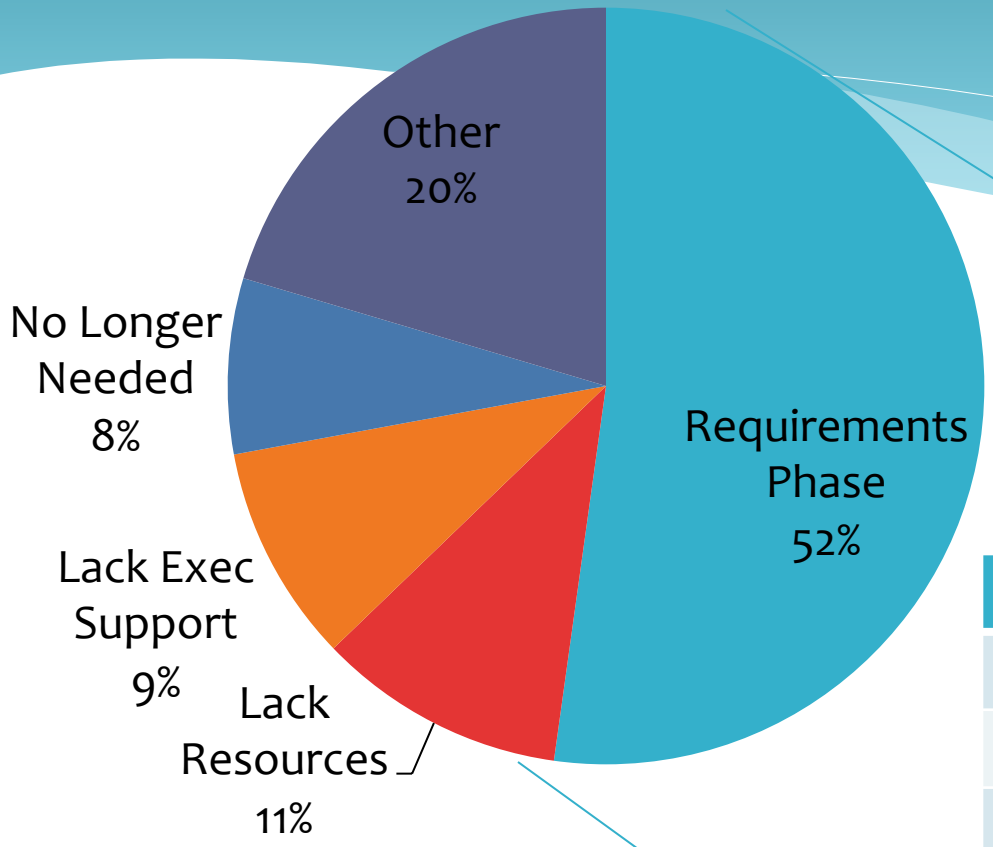
The Requirements Workshop is the most efficient and effective method to get stakeholder input on a new information system. A Requirements Workshop is the best path toward real functional requirements that meet your goals and improve your processes.

Information about getting the full version of the Requirements Workshop is provided on the last slide.

GreenXT

Green Expert Technology, Inc.

More than 1/2 of project failures could be prevented with better requirements



Failure Factor	%
Incomplete Requirements	13.1
Lack of user involvement	12.4
Unrealistic expectations	9.9
Changing requirements	8.7
Lack of planning	8.1
Total of Failed Projects	**52.2%**

Source: Standish Group survey of 350 companies involved in 8000 software projects

Eliminate 52% of the problem

Failure Factor	Stakeholder Solution
Lack of planning	Have a POAM specifically for the requirements phase.
Incomplete Requirements	Start with the project scope. Work out details using diagrams and drawings.
Lack of user involvement	Demand requirements meetings that include users.
Unrealistic expectations	Perform Validation of requirements.
Changing requirements	Document requirements then use a change management process.

What are the requirements?

* A **Requirement** describes a feature or function of a system that is needed to fulfill the system's purpose and goals.

* The **Requirements Definition Document** is written in terms that the customer and stakeholders can understand and describes everything that the customer expects the proposed system to do.

* The **Requirements Specification** restates the requirements definition in technical terms appropriate for system development and design.

Why is this needed?

* Requirements Phase is the source of 52% of project fails
* Users and developers have trouble communicating
* Requirements analysis is not in the core curriculum

Types of Requirements

* Physical Environment
  * Number of locations
  * Type of Location(s)
  * Environmental demands
* Interfaces
  * Inputs from external systems
  * Outputs to external systems
* Human Factors
  * User profiles
  * Types of users
  * Roles and responsibilities of user types
  * Training
  * Service Desk and user support
* Functions
  * What will system do
  * When will system do it
* Data
  * Data format
  * Storage requirements
  * Bandwidth Capacity
  * Frequency of updates
  * Accuracy
* Resources
  * Skills for developers
  * Physical space for the system
  * Power, heating, and air conditioning
  * Timetable
  * Funds
* Security
* Quality Assurance

Requirements Examples

* **System Purpose:**
* Develop a system that will allow homeowners to set their home thermostat using their smartphones.

* **Requirements Definition:**
* System must display current house temperature
* System must allow user to view history of temperatures

* **Requirements Specifications:**
* System must interface with ASHRAE standard controls
* System must store and timestamp temperatures every hour

Its not just about Failures

* We can make better systems
* Are 52% of all projects hurt by inadequate requirements phase?
* By definition, stakeholders have a stake in the success of a project.
  * Stakeholders should be proactive and use their influence to improve system development projects by better defining requirements.

Developers vs. Users

How users view developers

Developers…

* Don't Understand operations
* Emphasize technical
* Try to tell users how to do their jobs
* Are always late
* Are always over budget
* Unable to respond to changing requirements
* Ask for too much of users' time

How developers view users

Users…

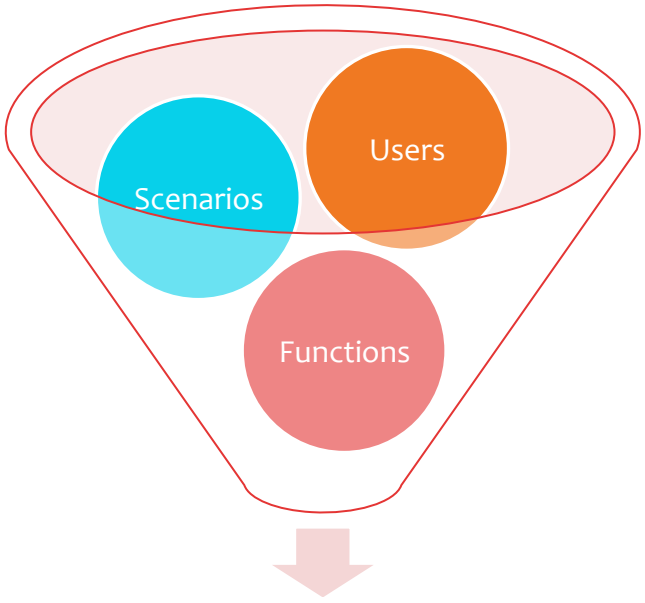
* Don't know what they want
* Can't articulate what they want
* Want everything right now
* Can't prioritize needs
* Refuse to take ownership of system
* Unable to commit / signoff

Requirements Analysis

Requirements analysis is a soft skill for a hard science

A. Eliciting system requirements from stakeholders requires use of tools and skills from the social sciences.
B. Building systems that meet requirements requires skills from engineering, math, and science disciplines
C. We need A and B to build a successful system

Requirements Analysis Process



Requirements

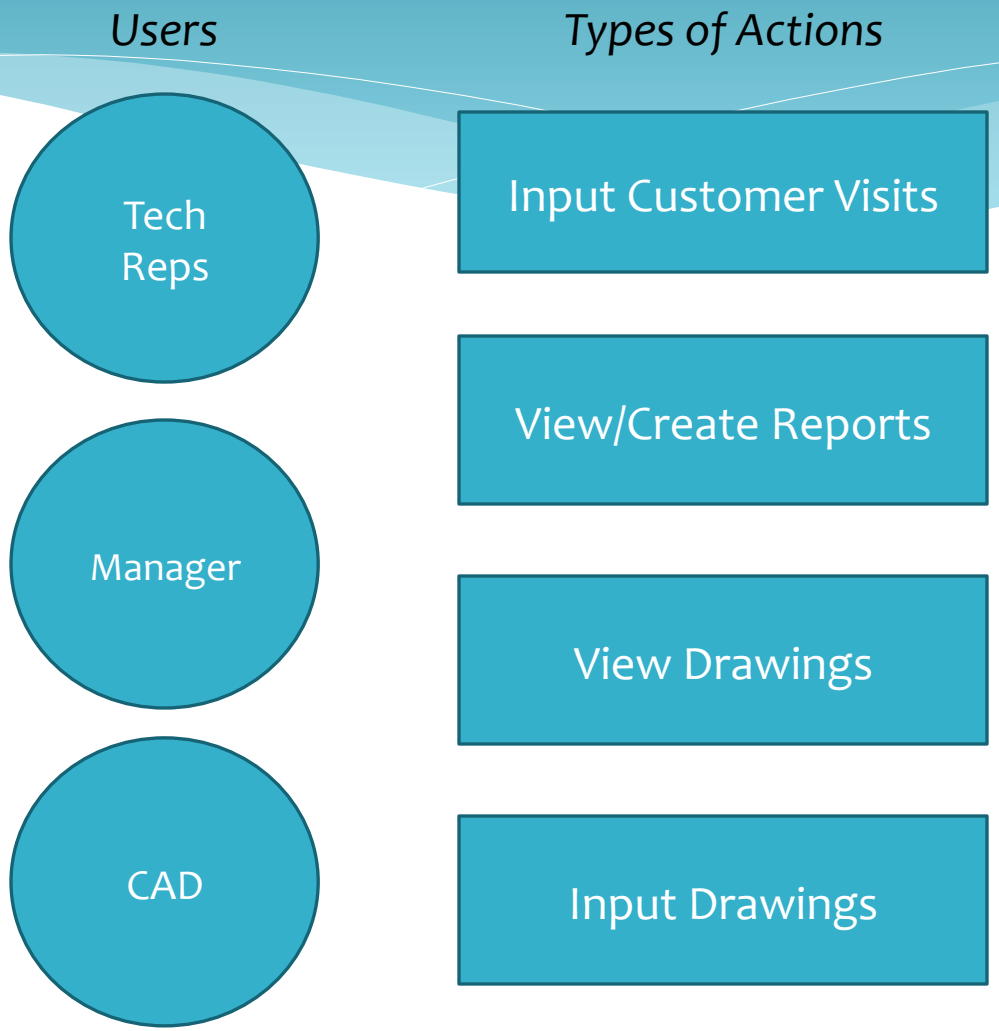
Analysis of Users

Break into groups
Fill out user types for as many users as possible
Report back & discuss

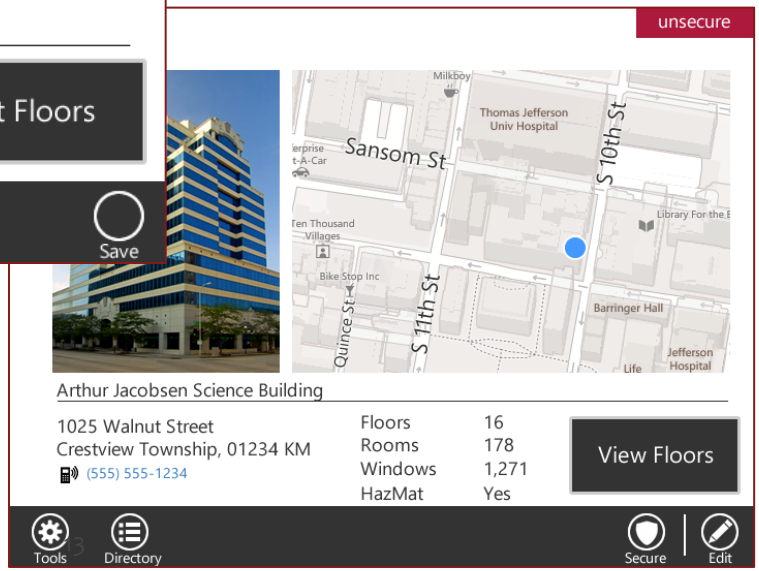
User Profile Name				
Profile Description				
Locations				
Location-specific Needs				
Report User?				
Related User Profiles				
Other info				

Example: User Flow Diagram

- Track tech rep work
- Track of 1000 customer visits a year
- Store and CAD drawings of boiler installs.
- Report metrics on customer visits
- Enable ad hoc reports
- Utilize mobile computing to input customer visits
- Allow tech reps to “check in” from customer sites using mobile app



Use Drawings & Mockups



Example: Prioritize these requirements

ID	Module	Requirement	Priority
1		Track minimum of 10 tech reps	
2		Track minimum of 1000 site visits a year	
3		Store and Manage 3D renderings of boiler installs at customer sites.	
4		Report metrics on customer visits	
5		Report how many site visits per month	
6		Report on visits by tech rep	
7		Report on visits by customer	
8		Utilize mobile computing to input customer visits	
9		Allow tech reps to “check in” from customer sites using mobile app – similar to Facebook	

Guidelines for Stakeholders

For better systems.

* Focus on the system's purpose and goals
  * What problem are we solving?
* Commit to a Successful Project
  * Stakeholders are part of the team and share in success & blame
* Ask questions of the developers
  * There are no foolish questions, but there are foolish demands
* Get in the weeds and work on the details.
  * If you don't, who will?
  * Use diagrams, mockups, screen shots, examples…
  * Prepare for meetings by gathering data
  * Assign and Track actions
  * Document requirements
  * Review, Validate, signoff, and manage changes
* Communicate
  * Help to prioritize the system requirements
  * Seek to understand other people's needs
  * Advocate for your own needs

Business Case Descriptions

Break into groups

Describe usage scenarios in detail

Business Case Name				
Users involved				
Data Fields – describe data fields				
Input requirements External systems Hand-entered information Attachments				
Output requirements External systems Print or email requirements Attachments				

Full Verison of the Requirements Workshop

If you are interested in the full Requirements Analysis Workshop, contact Bruce D. Green. Bruce would be happy to facilitate a Requirements Workshop for your organization.

Bruce has led numerous product development projects for Fortune 500 companies and the DoD. He has deep experience working with stakeholders to develop useful systems. He has studied requirements elicitation and product prototyping methods and integrated successful methods into a straightforward process. His more than fifteen years of studying why people choose to use one product over another has led to a book, published articles, and presentations at academic and industry conferences on system development, usability, technology acceptance, and system testing.

856.520.6342
bruce@greenxt.com