Steps to Creating Value with Decision Support

1. Understand the problem
2. Identify high-leverage decision support opportunities
3. Obtain stakeholder buy-in
4. Practice iterative evaluation-centered design
5. Support decision makers
6. Avoid “drop it off and exit”
7. Improve your DSS development process
Understand the Problem

• Know the business
  – What are the biggest bottom-line drivers for your stakeholders?
  – How can decision support add value?

• Know the users
  – Computer experience
  – Degree of resistance to automation

• Understand the task to be supported
  – Workflow; communication pathways; paper trail
  – Bottlenecks / error-prone aspects of current process
  – Aspects that could benefit from full or partial automation
Identify High-leverage Decision Support Opportunities

- Automation (full or partial) would have bottom-line impact
- Technology exists to automate (fully or partially)
- Necessary inputs and parameters can be obtained within reasonable cost and effort
- Model exists as COTS component or is feasible to implement within time & cost constraints
Obtain Stakeholder Buy-In

• Management
• Users
  – User champion / user liason can be key to success
• Other affected parties
  – Participants in workflow
  – Parties affected by task result
Practice Iterative Evaluation-Centered Design

• Evaluate early and often
• Build stakeholder vision of desired end state
• Obtain feedback from stakeholders and feed back into design
• Communicate respect for stakeholders and willingness to respond to their concerns
• Assess and manage potential for DSS to change how the task is performed
Support Decision Makers

• Be usable
  – Display information in ways that decision relevance is clear
  – Use consistent and understandable (to user population) terminology
  – Provide natural, straightforward, non-tedious data entry
  – Perform usability studies and incorporate results into design
  – Adhere to usability guidelines and standards
  – Support natural and efficient workflow

• Provide understandable and correct models
  – Results are accurate enough for purpose
  – Results and reasoning are understandable to users
  – Required inputs are feasible to obtain

• Be interoperable
  – Avoid tedious manual reformatting and data re-entry
  – Avoid unnecessary duplication of functionality
Avoid “Drop it Off and Exit”

- Pay attention to integrating DSS into organization
- Work the organizational process to obtain acceptance at all necessary levels
- Be available to respond to problems after installation
Improve Your Development Process

- Use each DSS development effort to improve future development efforts
- Capture lessons learned
- Review lessons learned
- Summarize collection of lessons learned into objectives for improvement
- Monitor progress toward achieving objectives for improvement
Where We Have Been

1. Decision Making and Decision Support
2. Models, Cognitive Tools and Decision Making
3. DSS Elements: The Model Subsystem (1) - Decision Analysis and Optimization
4. DSS Elements: The Model Subsystem (2) - Other Model Subsystem Technologies
5. DSS Elements: The Dialog Subsystem
6. DSS Elements: The Data Subsystem
7. Putting the Pieces Together: The DSS Lifecycle
8. Evaluation-Centered Design
9. Decision Support for Multi-Person Decisions
10. Creating Value with Decision Support
In Summary...

Thanks for a Great Semester!