

Usability notes on the processes in: IEEE/EIA 12207.0-1996, ISO/IEC 12207, Standard for Information Technology — Software life cycle processes

One of my suggestions is that you embed usability in your firm's processes. The first rule rule of embedding is to embed *in* your firm's processes. Don't make up your own, because then your process will not interface well with the other disciplines in a project team. One way to embed would be to offer to help maintain the firm's processes. (Often, this is a job no one wants. At least, no one who is qualified to do it wants it. Certain bureaucrats are attracted by the possibilities of large rule books and mindless consistency, but that's another discussion..... Just make sure the outcome is something everyone finds useful.)

If your firm doesn't have these structures in place, then the IEEE standards are a good place to start. The outline below lists the "standard" software processes. Note that usability is *not* properly considered in the international standards. Most of these processes (and the tasks under them) should be viewed as "opportunities for embedding". :-)

I. Primary life cycle processes

- A. Acquisition process — Process to buy software services (your client executes this process)
 - 1. Initiation [*This includes requirements analysis — try to insert usability here (consultative selling).*]
 - 2. Request-for-Proposal preparation [*At this point, client decides what services are necessary — if usability isn't in the plan here, you're going to be struggling to ever get it put in later.*]
 - 3. Contract preparation and update [*Cost and schedule are set here. Now you're in real trouble if the client hasn't bought usability services.*]
 - 4. Supplier monitoring
 - 5. Acceptance and completion
- B. Supply process — Process to provide software services (your firm executes this process)
 - 1. Initiation [*Review RFP, bid/no-bid decision*]
 - 2. Preparation of response [*Be sure usability is in the RFP response!*]
 - 3. Contract [*Don't get cut out during schedule and cost negotiations.*]
 - 4. Planning
 - 5. Execution and control
 - 6. Review and evaluation
 - 7. Delivery and completion
- C. Development process — Process to define and develop software
 - 1. Requirements analysis [*Gather info. about goals, users, environment, processes, etc.*]
 - 2. Architectural design [*Work closely with the architect to ensure the anticipated UI structure, functions, and technologies are supportable in the application architecture.*]
 - 3. Detailed design [*Be sure sufficient time is planned for client reviews & usability tests of prototypes.*]
 - 4. Coding and testing [*Stay closely in sync with developers to eliminate the "Oh! This screen needs to do that?!" surprises. Developers need to have advance warning of all of the data elements and actions required by the UI.*]
 - 5. Integration
 - 6. Qualification testing [*Opportunity for user observation.*]
 - 7. Installation [*Make sure install date coincides with user training.*]
 - 8. Acceptance support [*Some post-install user interaction is important here.*]
- D. Operation process — Process to operate system in live environment for users
 - 1. Operational testing
 - 2. System operation
 - 3. User support [*Feed back user problems into design.*]
- E. Maintenance process — Process to manage modifications to keep software running
 - 1. Problem and modification analysis [*Be sure to keep usability involved in reviewing the system actual use and the proposed changes.*]
 - 2. Modification implementation
 - 3. Maintenance review/acceptance
 - 4. Migration
 - 5. Software retirement

II. Supporting processes

- A. Documentation [*Documentation can be made more usable, too!*]
- B. Configuration management [*Be sure to have user representation on the change control board.*]
- C. Quality assurance/verification/validation/joint review/audit [*Usability should be included as a quality attribute.*]
- D. Problem resolution [*Review problems (bugs) from the usability perspective.*]

III. Organizational life cycle processes

- A. Management process
- B. Infrastructure process
- C. Improvement process
- D. Training process