Who Needs Reliable Project Estimates?

- Managers – Team resource planning and budgets
- Team Members – Buy-in and realistic commitments
- Consultants – Business depends on it

With reliable estimates, can make business decisions
... can say a project will cost “No more than ...”
Why Develop and Use Metrics?

Issues with SWAGs and gut-level feeling:
- Inconsistent, difficult to reproduce estimates
- Hard to train team members to estimate projects
- Unsure of commitment levels
- Hard to defend estimates

What Are Metrics?

- Metrics are ways to quantitatively assess and measure a process.
- A metric includes:
  - How the measurement is calculated
  - Range of values considered normal
  - Target value
- Metrics (key performance indicators) are used to track trends, productivity, resources, etc.
What Will We Talk About?

- Common problems with estimating projects
- What we need for reliable estimates
- Prerequisites for metrics-based estimating
- Process: Estimating a project
- Example scenarios
- Ways to extend and enhance this approach

Common Problems: Underestimating

Myth: Estimate the time it would take me to do it...
- What knowledge/experience does the team have?
- What relationships does the team have?

Myth: Estimate 40 hours a week of work...
- What about meetings, breaks, other commitments?
- What about vacation/holiday/sick time?
- Is overtime a consideration?
Common Problems: Overestimating

Myth: A book takes 60 days to produce...
- How many pages will actually change?
- What type of source/knowledge is available?

Myth: A product requires 1 writer per 7 developers...
- Where in its lifecycle is the product (new, maint.)?
- How efficient is the development team?
- Does the product have many/elaborate UIs?
- Does the product have complex concepts?

What Do We Need?

- Reliable/repeatable metrics for defined units of work that we can use as a base for estimating
- Flexible model to adjust as we learn and as our team or environment/process changes
- Common ways to adjust processes that reduce metrics (fewer reviews, different personnel,...)

- We use Excel to plan/review/evaluate/learn... could use Microsoft Project or other tools
Collecting Prerequisites

Define standard deliverables

- Help (chm file, WebHelp, … converted content)
- Embedded Help (field descriptions, UI content, …)
- Release Notes / README file
- White Papers and Technical References
- Autorun
- Product Preview (sales demo)

Collecting Prerequisites

Define standard processes (repeatable):

1. Complete project definition and task analysis.
2. Create an outline for review.
3. Create First Draft (70% done, all topics identified, Info Dev team review).
4. Create Approval Draft (95% done, full review).
5. Create Quality Edit (100% done, final ID review).
6. Produce final deliverable files.
Collecting Prerequisites

Identify common units of work
- Write a page, task, or topic.
- Create a deliverable, such as Release Notes.
- Perform a specific task during a project, such as:
  - Editing a topic
  - Incorporating review comments
  - Converting content to Help

Small chunks are easier to accurately estimate

Collecting Prerequisites

Find starting metrics for each unit of work:
- Estimate from previous projects.
- Estimate from a small sample set/task.
- Ask others and start with their standards:
  - Hackos; Managing Your Documentation Projects
  - Mueller: 6hr / 4hr / 2hr

Adjust your metrics as you learn
Process: Estimating a Project

- List tasks based on units of work & estimate
- Compare estimate with gut-level (OK?, review?)
- Record actuals, variances, actions outside process
- Compare actual to estimate... decide why different
- Adjust metrics for future, if needed
  - By unit of work
  - By personnel (experience, ramp time, …)
  - By client or development team (dynamics, requirements, …)

Example Scenario 1

- Deliverables:
  - User Guide (about 100 pages)
  - Help (from converted User Guide content)
- Process: Outline and 3 reviews (1 external review)
- Units of work and metrics:
  - 6 hr / new page, no source or knowledge
  - 4 hr / reworked page, some source or knowledge
  - 2 hr / revised page, good source or knowledge
- Estimate: 600 hours (no source/knowledge)
  400 hours (some source/knowledge)
Example Scenario 2

- **Deliverables:**
  - User Guide & Help (add new features to User Guide)
  - Feature overviews for Web (2 pages)
  - Estimate # of pages based on similar features in book OR Estimate # of concepts, tasks, & reference topics

- **Process:** Outline and 3 reviews (1 external review)

- **Units of work and metrics:**
  - 6 hr / new page, no source or knowledge
  - 4 hr / reworked page, some source or knowledge
  - 2 hr / revised page, good source or knowledge

- **Estimate:** 124 hours
  (20 new pages + 2 revised pages)

Example Scenario 3

- **Deliverables:**
  - Window descriptions (100 windows; add to converted Help)

- **Process:** Build file structure, 1 content review

- **Units of work and metrics:**
  - 3 hr / window help topic with common questions format
  - 1.5 hr / window help topic, general description format

- **Estimate:** 300 hours
  (see next slide - embedded window description)
Example Scenario 4

- **Deliverables:**
  - Release Notes
  - Autorun
  - Product Preview Sales Tool

- **Process:** Create and 1 review

- **Units of work and metrics:**
  - 24 hr / release notes
  - 8 hr / autorun
  - 100 hr / product preview, if have messaging & tour outline

- **Estimate:** 132 hours
  (see next 2 slides)
**Autorun**

Uses standard layout file

8 hours includes text, adding to build, and testing

**Product Preview Sales Tool**

Uses standard layout files

100 hours includes about 20 topics with navigation
Example Scenarios – Adjustments

Ways to adjust estimates:
- More experienced team members may have different metrics, such as 4hr/3hr/2hr
- Eliminate First Draft review and comments for experienced members, reduce to 5hr/3hr/2hr
- Change deliverable formats to those with less time requirements, such as basic window descriptions instead of embedded Help with common Q&A
- Scope project to limit areas of new learning
- Get source to rework (from SME can help)

Example Scenarios – Potential Issues

Potential issues to consider:
- Small projects need time to learn product/project
- Will features change or be added/removed
- How does team work (late comments, extra reviews, remote members)
- Will there be dead time in cycles (waiting for comments, UI milestones, specs)
- Vacation/holiday/sick time

Adjust metrics or add items (ramp time...)
Extend and Enhance This Approach

- Create printable project summary page
- Create schedule chart with % time commitment
- Add items for complete hand-off packet
  - Goals
  - Resources. SMEs, team members and roles
  - List of stuff to do (LSD)
  - Audience definition
  - Usability and graphics information
  - Other related projects

Thank You