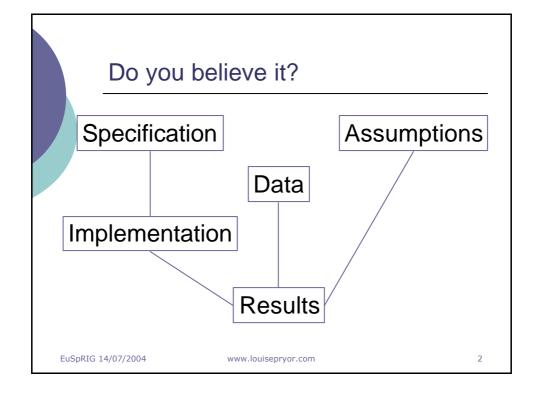
# Being less subversive

Louise Pryor www.louisepryor.com

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www.louisepryor.com



# Systems and controls

- o Be aware of what can go wrong
- Process
  - Specification
  - Developing and maintaining
  - Testing and reviewing
  - Using
- Techniques
  - Formulae etc
  - Formatting and layout
  - Macros and other tools

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# Specification

- The only way that you can tell whether the spreadsheet is correct
- Always needed
- Level of detail and sophistication may vary

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### Developing and maintaining

- Moving from specification to implementation
- Maintenance always happens; changes are always needed
- o Control your versions!
  - Development, testing, release
  - Record information in the spreadsheet itself
  - Use a good naming convention

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# Testing and reviewing

- Version control
  - What version has passed which tests?
  - Which tests should be applied to which version?
- Testing vs reviewing
- Use reviewing tools

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### Using

- Version control
  - What version are you using?
  - Use a copy, not the original
- What changes should you make?
  - Assumptions
  - Data
  - Formulae
- Templates

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### **Formulae**

- o Try to make it hard to go wrong
- If it's difficult for someone else to understand, it was probably difficult for you to get right

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#### Good formulae

- Explicit assumptions (no hard coded constants)
- Short, easy to read
  - Use Names
  - Avoid nested formulae
  - Use intermediate results where necessary

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### Formula pitfalls

- Don't test for equality on floating point numbers
- Don't use real-valued lookups
- Use correct timing for discounting functions
- 0 ...
- In general, be aware of specifications of built in formulae

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### Formatting

- Distinguish inputs and outputs
- Make it clear what the user is allowed to do
- o Don't disguise things!
  - No white on white
  - Hiding information under controls or graphs

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### Layout

- Make things clear
- Think of the different users
  - Maintainer
  - Player
  - Viewer
  - Auditor

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#### Macros and other tools

- Solver, goal seek ...
- External links
- Big problem is loss of consistency
- Watch out for manual calculation setting!

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### Get help!

- Use appropriate tools
  - Reviewing: SpACE, Operis,
    Spreadsheet detective, Spreadsheet professional, ExChecker, ...
- XLSior: testing, documentation, version control, external links, ...
- Learn about good practice
  - Read books, attend courses, come to EuSpRIG ...

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www.xlsior.com

### Be aware

- Of what can go wrong
- Of the likelihood that it will go wrong
- Of overconfidence (even after allowing for it)
- Treat developing or using a spreadsheet as a risk management exercise

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