Hang On a Minute
- What Happened to My Requirements?

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Hang On a Minute - What Happened to My Requirements?

What engineering produced

What the customer wanted

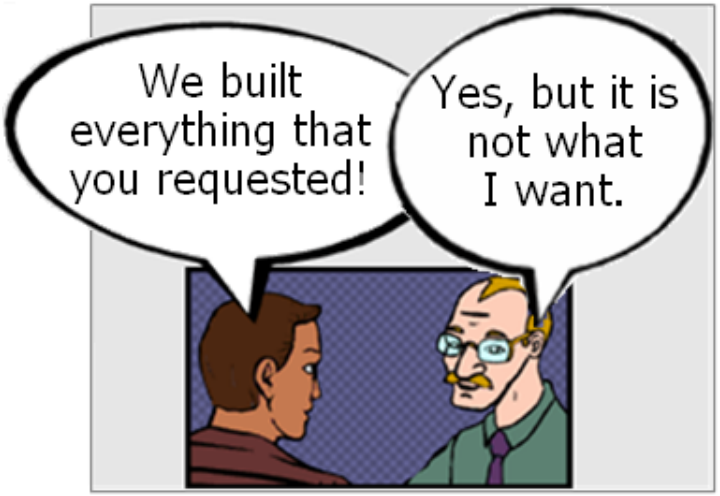
What we will cover

- Why do your specified requirements not appear in the delivered product?
- Requirements happen across the whole of the lifecycle – not just at the beginning.
- What you can do to better manage the requirements set, and ensure that the developing product is meeting expectations.
- Conclusion and time for final questions.

Agenda

- **Root causes of disappearing requirements**
- Requirements across the whole lifecycle
- Tips and Techniques
- Conclusion

Some Familiar Situations…



Why your requirements don't appear in the final product

①

- Poorly defined requirements
- Not keeping track of changing requirements
- Developers doing what they want
- Impact analysis not undertaken properly
- Large volume makes managing the requirements set difficult

Why your requirements don’t appear in the final product

②

- Not changing scope as needs change
  - Stakeholders change their minds
    - and don’t tell you
  - Business imperatives
- Test squeeze
- Locked into early screen designs

Agenda

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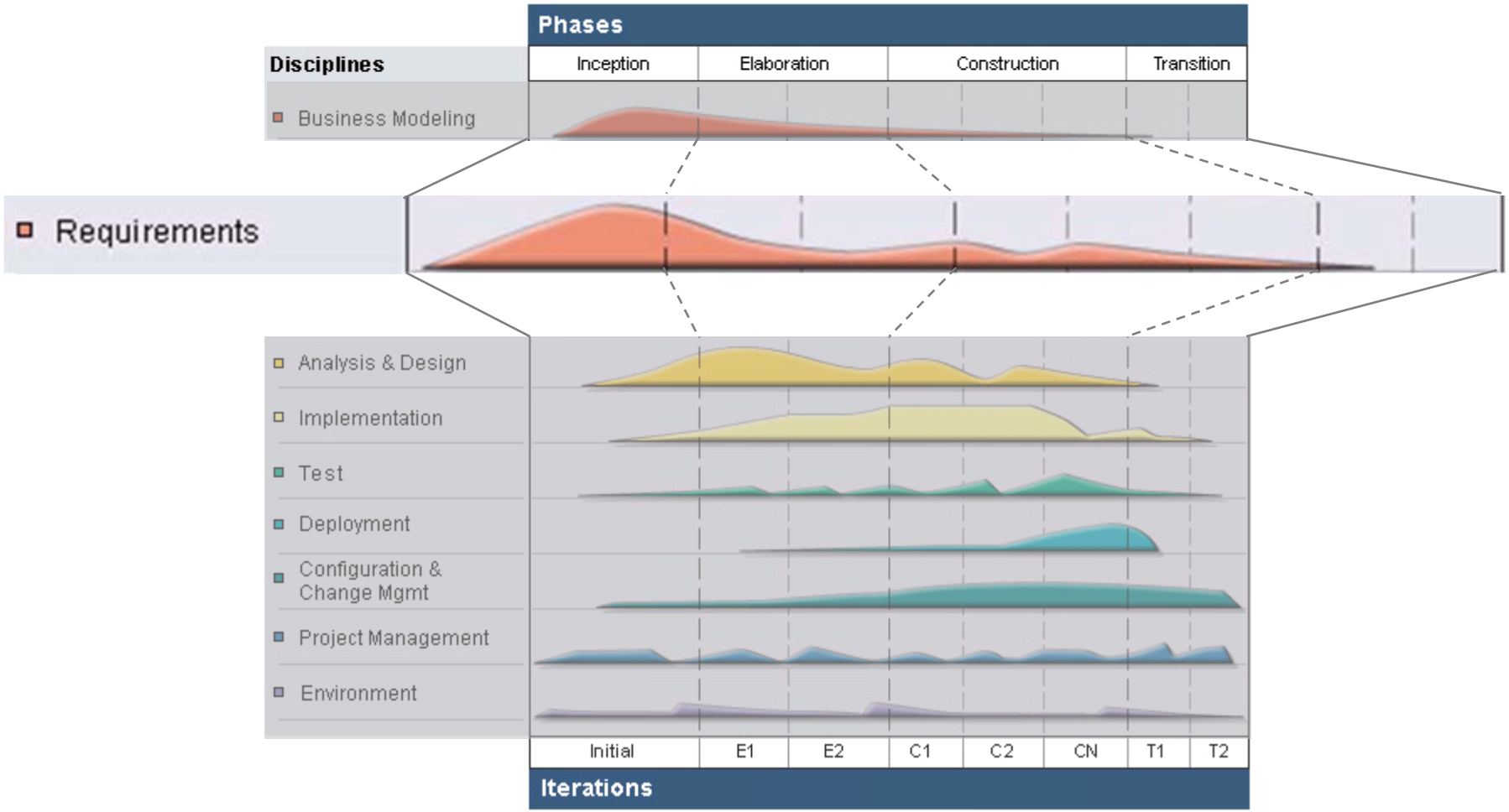
Requirements across the whole lifecycle



Changing emphasis across the phases (optimal):

- In Inception, confirm the scope
  - 60%-80% of final requirements gathered
- In Elaboration, refine scope through discovery when mitigating risks
  - Negotiated scope change – add, modify and delete requirements
- In Construction, minor changes to scope
- In Transition, no new requirements

The Requirements Management Practice

Content References

- How to Adopt the Requirements Management Practice
- Key Concepts
  - Requirements
  - Requirement Attributes
  - Traceability
- Work Products
  - Requirements Attributes
  - Requirements Traceability
  - Requirements Management Process Description
- Tasks
  - Organize Requirements
  - Assess Requirements Consistency
  - Manage Changing Requirements
  - Plan Requirements Management Strategy
- Analyst

①

from the IBM Rational Unified Process

The Requirements Management Practice

②

- Guidance
  - Tool Mentors
    - Packaging Requirements in RequisitePro
    - How to assign attributes with RequisitePro
    - How to establish and verify traceability with RequisitePro
  - Packaging Requirements
  - Categorizing Requirements
- Measurements

Inputs

- [Technical Specification]

from the IBM Rational Unified Process

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- Root causes of disappearing requirements
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- **Tips and Techniques**
- Conclusion

What you can do to stop requirements disappearing

①

- Use the requirements to gain and maintain agreement
- Document and maintain the requirements set
- Organize your requirements
- Create and use attributes
- Trace between the types of requirements

What you can do to stop requirements disappearing

②

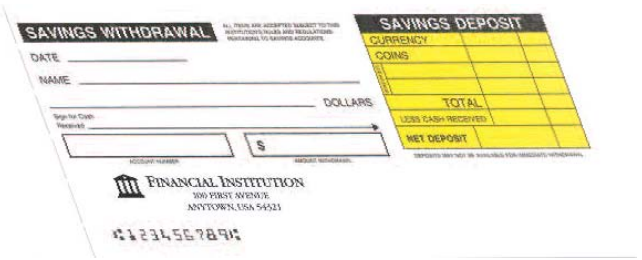
- Plan and measure
- Control change
- Avoid GUI design too early
- Automate where practical
- Gradually improve your requirements practices

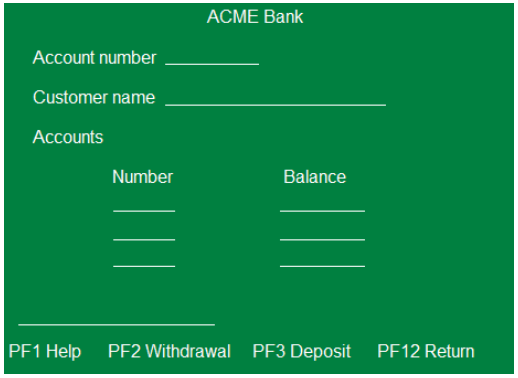
Use the requirements to gain and maintain agreement

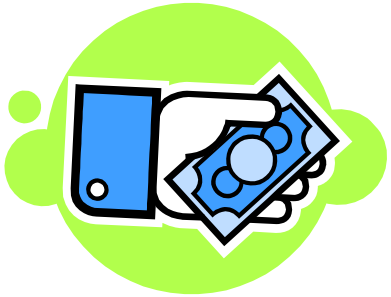
- Tell the stakeholder what you think they are telling you
  - Requirements Composer lets you tell stories
- Document and maintain the requirements set
  - Communicate to the developers, testers and tech writers
- Use a requirements hierarchy to do impact analysis
  - Allows discussion on scope change
- Don’t let the stakeholders change the originally submitted document
  - Make them do a change request instead

Tool: IBM Rational Requirements Composer

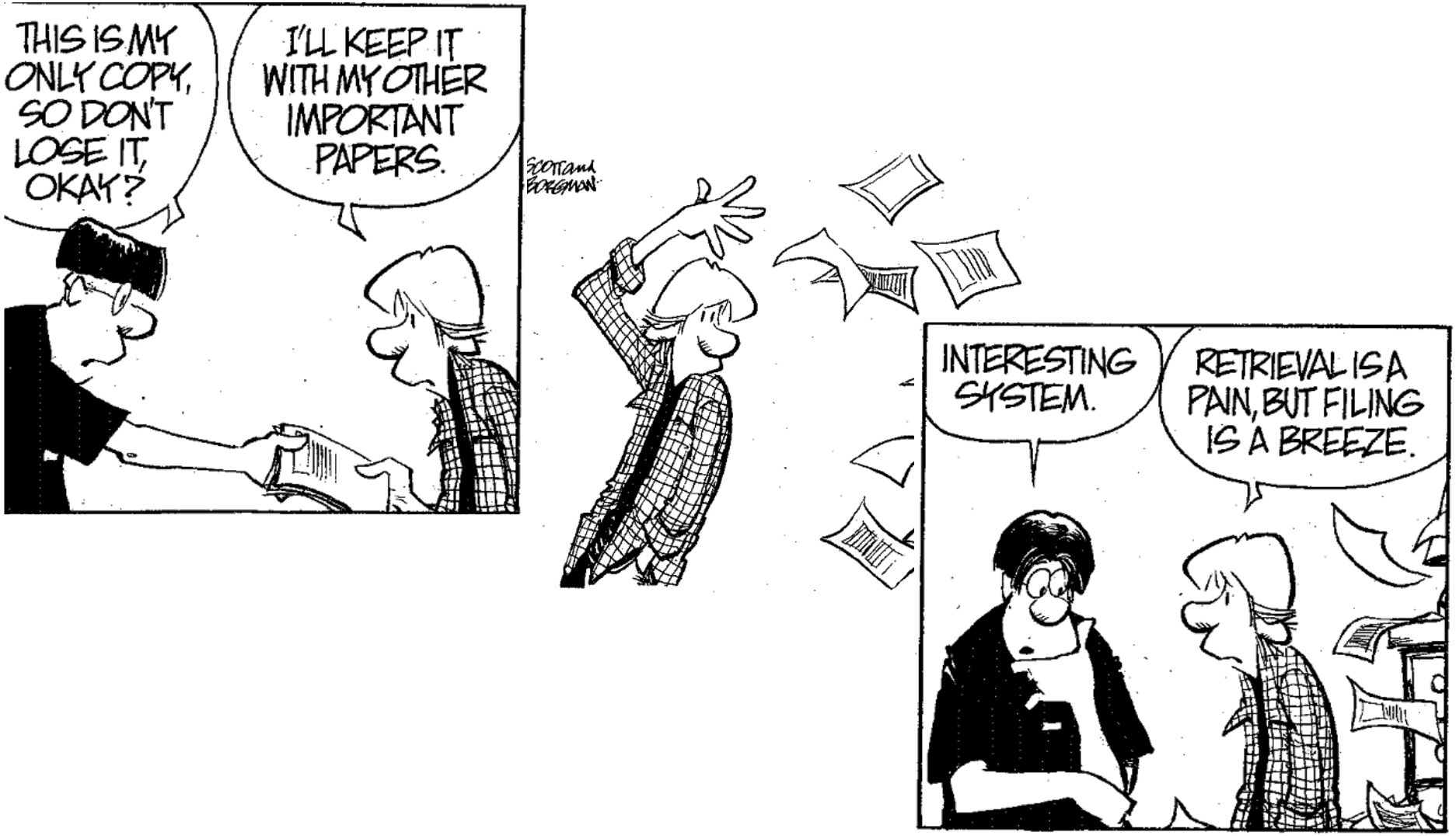
Storyboards are more than just screenshots







Document and maintain the requirements set

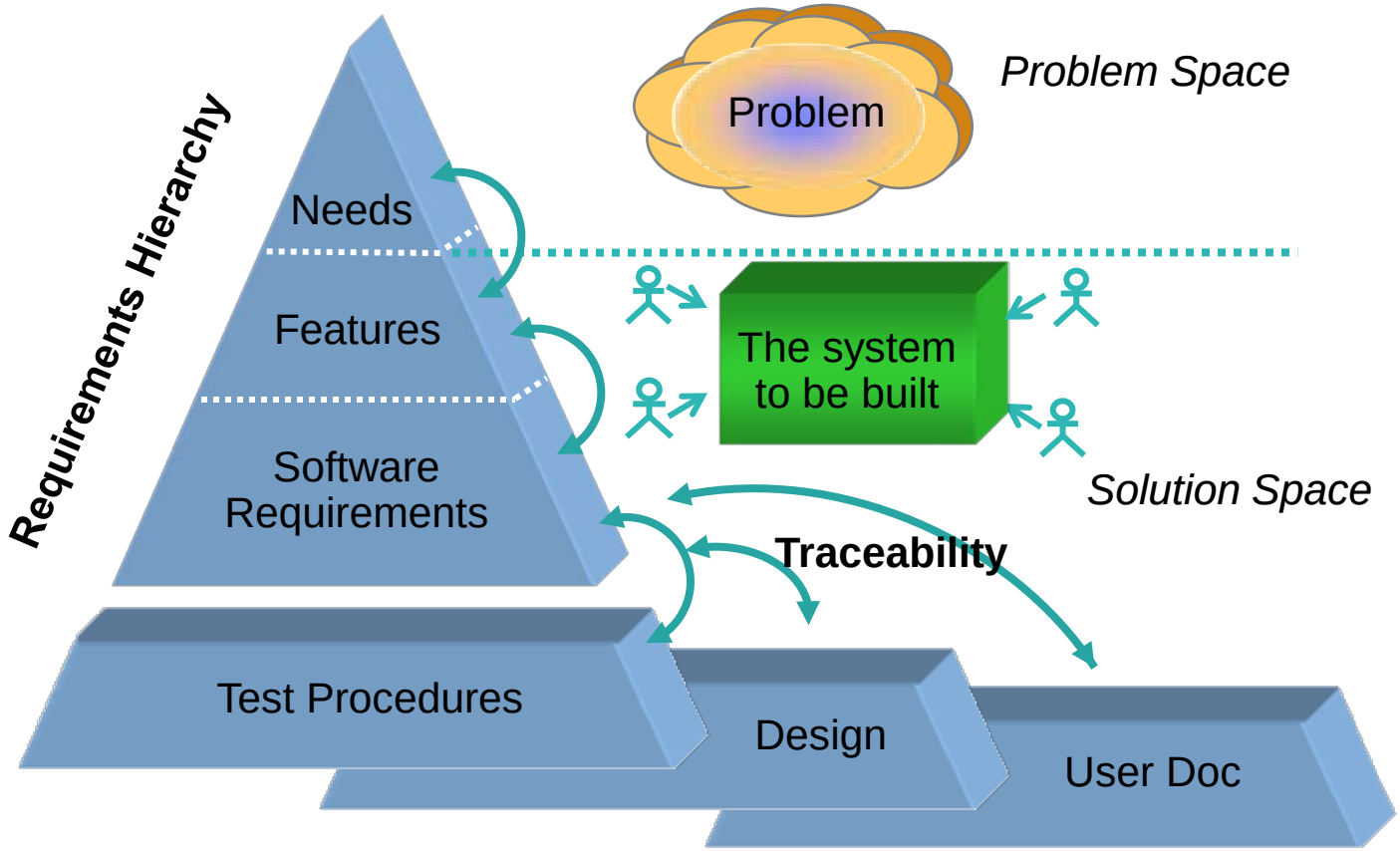


Document and maintain the requirements set

- Write them down
- Index them
- Your copy of the requirements is the reference point
- Update them as they change
- Use them as the basis for testing

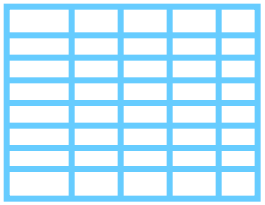
Tool: IBM Rational RequisitePro

Organize your requirements

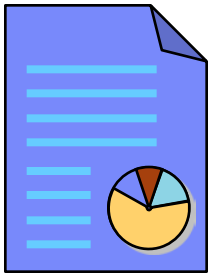


Controlling

Security



Attributes



Metrics

Tooling

Organize your requirements

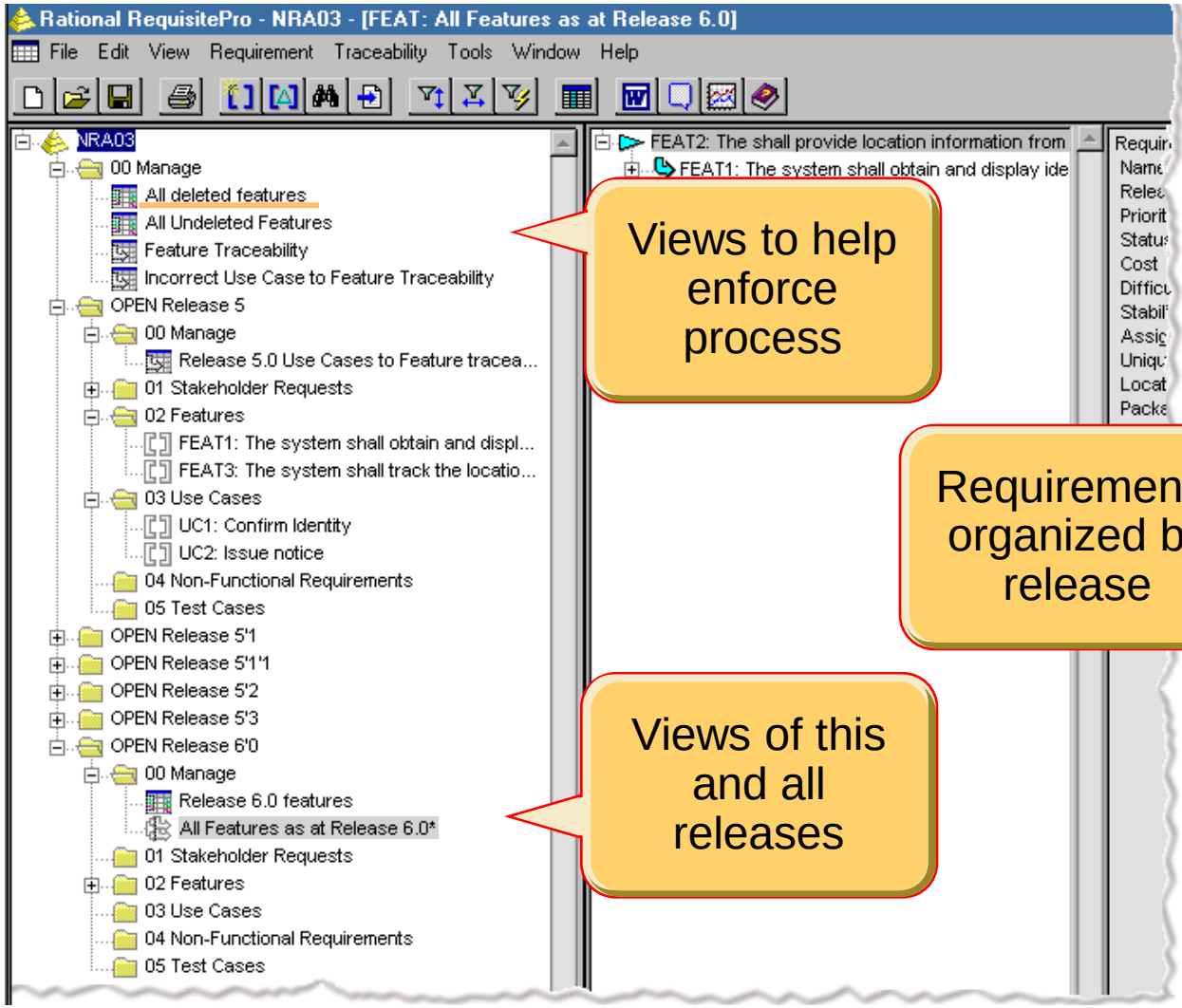
- Not all requirements are equal
- Large numbers of requirements are unmanageable
  - Group them by purpose; person; importance; timing; layer or a combination of these
- Control who can change requirements
  - You don’t want the programmers changing them!

Create and use attributes

- Attributes are the metadata of the requirements
- Use attributes to perform
  - Scheduling
  - Integration with change requests and defect tracking
  - Correctness analysis
  - Trend analysis

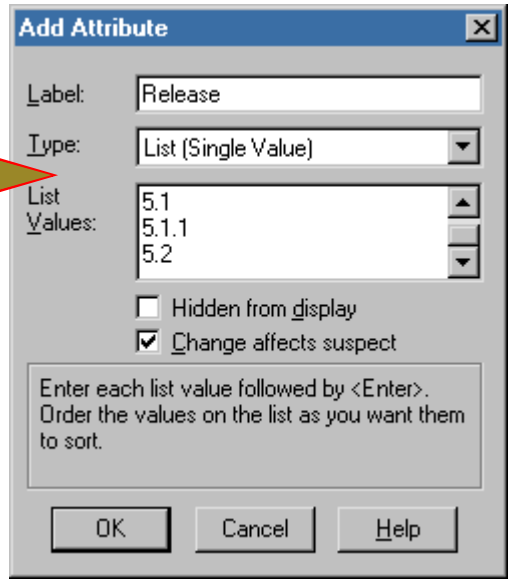
Tool: IBM Rational RequisitePro

Using attributes – checking on what is being done when



Assists to organize and trace the requirements.

Can find requirements by release quickly.



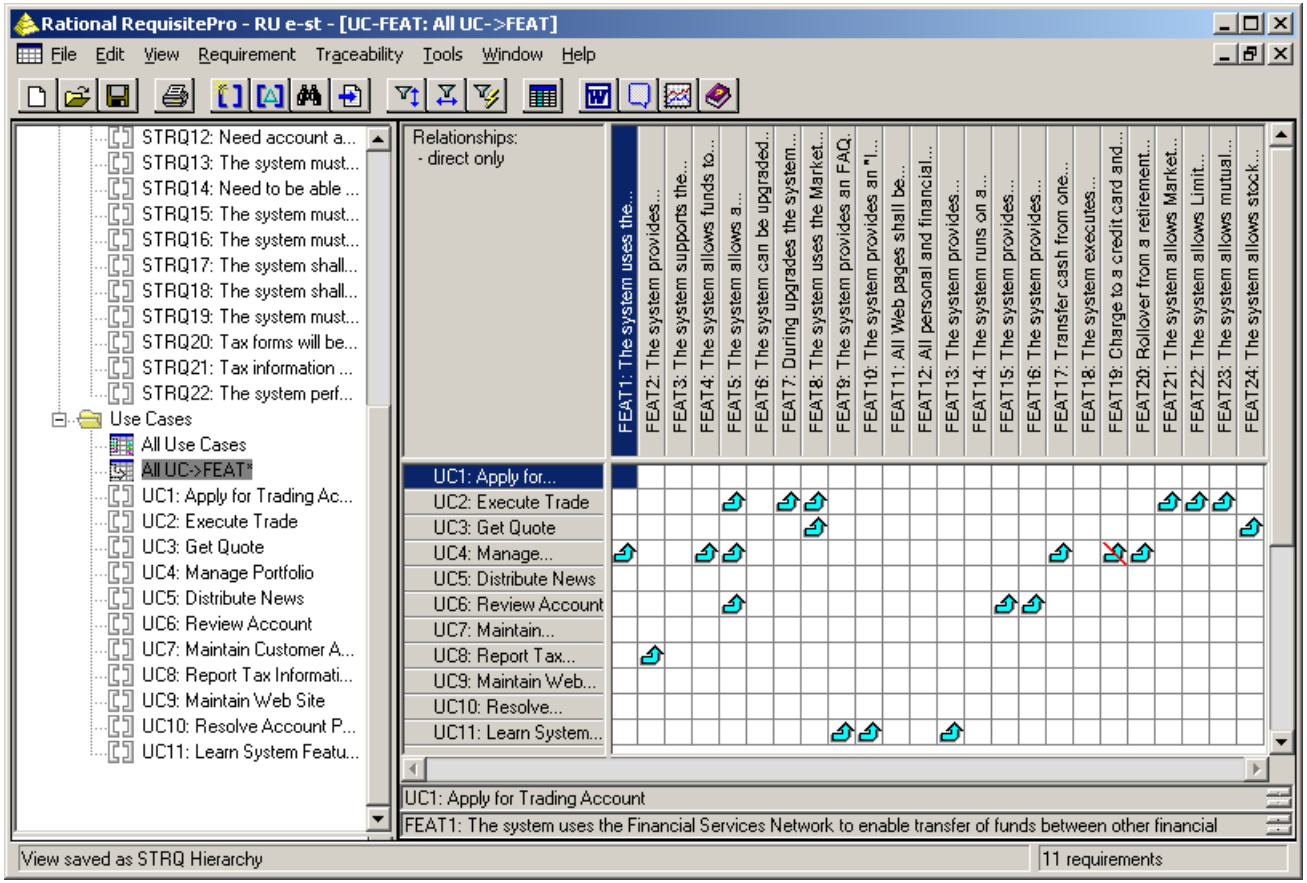
Trace between the types of requirements

- Tracing the relationship between requirements of different types helps you to perform
  - Impact analysis
  - Completeness analysis
  - Coverage analysis
  - Testing
  - Confidence tests

Tool: IBM Rational RequisitePro

Trace between the types of requirements

- Shows relationship between two requirements.



Plan and measure

Tool: IBM Rational Method Composer

Plan and measure

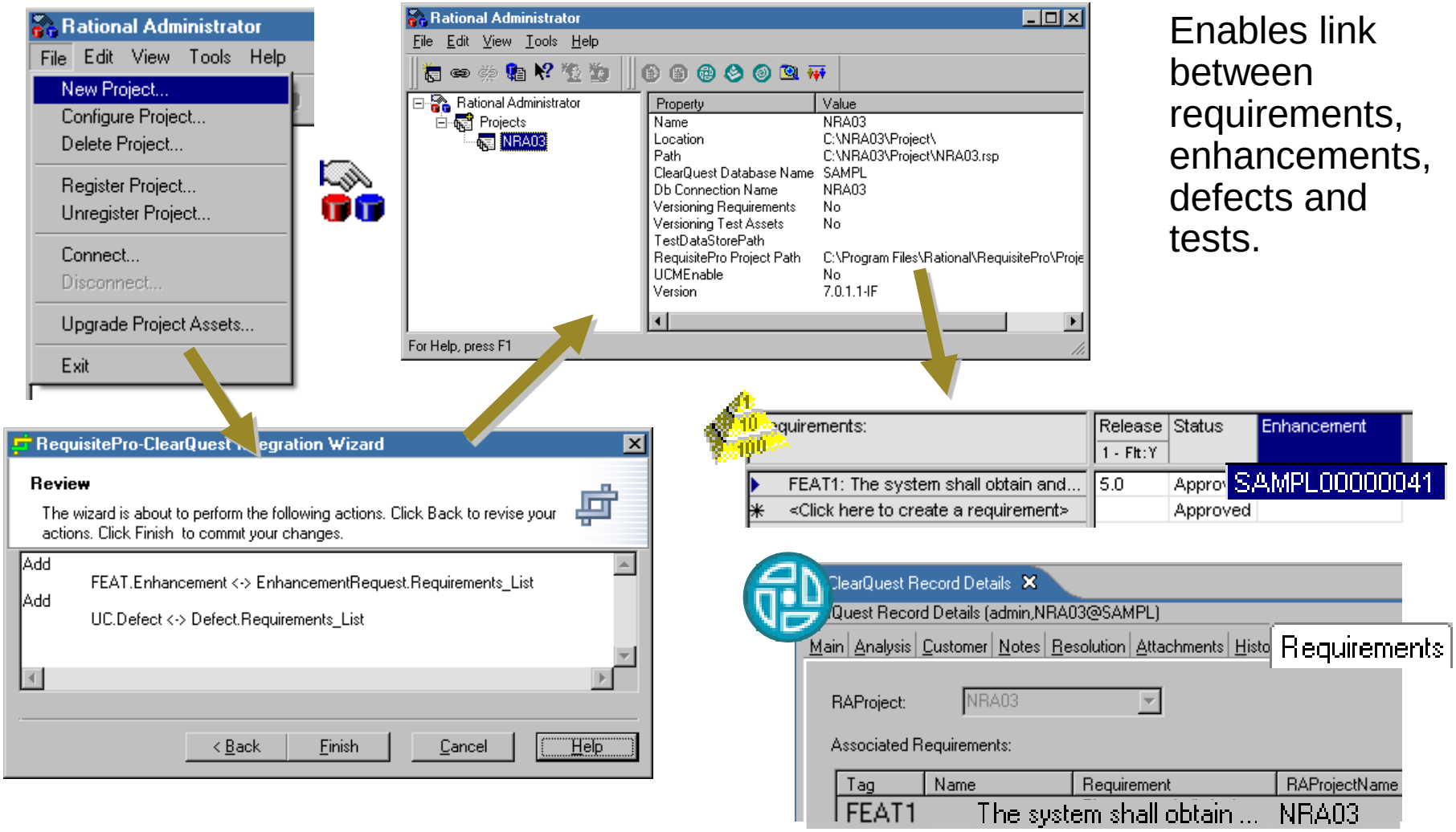
- What process and mechanisms will be used
- Tooling
- How will it be configured
- Measurements and metrics
- Reports
- Requirements change management

Control Change

- Control change or it will control you
- Beware the scope creep
- Perform impact analysis
  - What other changes will occur
- Change will happen – ensure it happens in an orderly manner

Tool: IBM Rational ClearQuest

Integrating requirements with change – defects, etc.

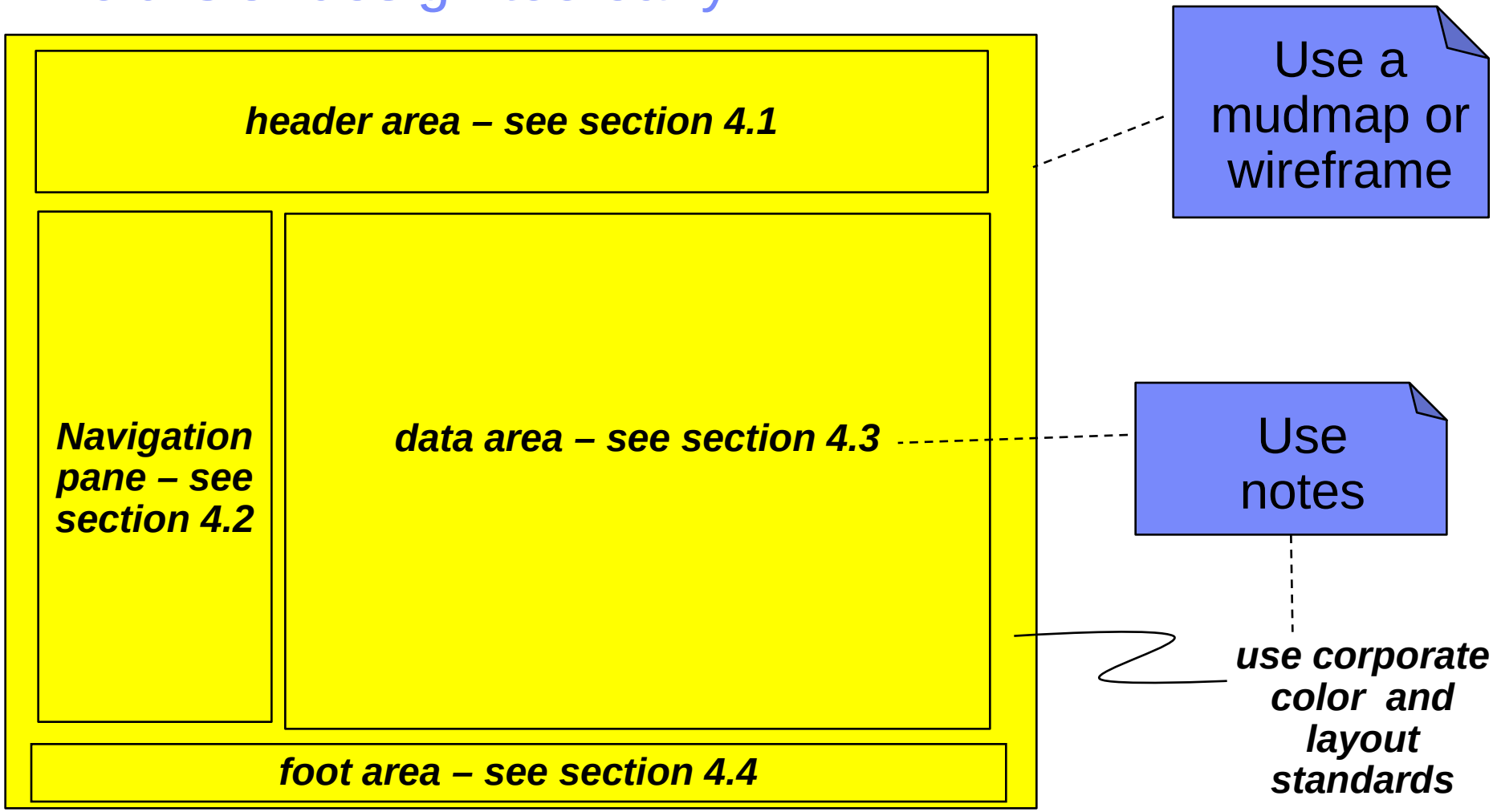


Enables link between requirements, enhancements, defects and tests.

Avoid GUI design too early

- Aim for GUI requirements, not design
  - You are not locked in too early to the solution
  - Reduces time to get agreement
    - No haggling about where a field goes, or what it looks like
  - Makes defining the scope quicker
  - Your job is easier
  - Gives the GUI designer something to do

Avoid GUI design too early



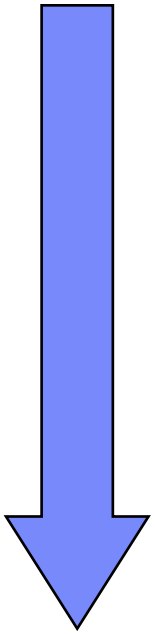
Tool: IBM Rational Requirements Composer

Automate where practical

- No one just uses paper and pencil anymore
- Use the tools that suits your needs
- Allow time to get skilled in the product
- Improve your work practices
  - You don’t want to do bad things quicker

Gradually improve your requirements practices

- *Written*
- *Organized*
- *Structured*
- *Traced*
- *Integrated*



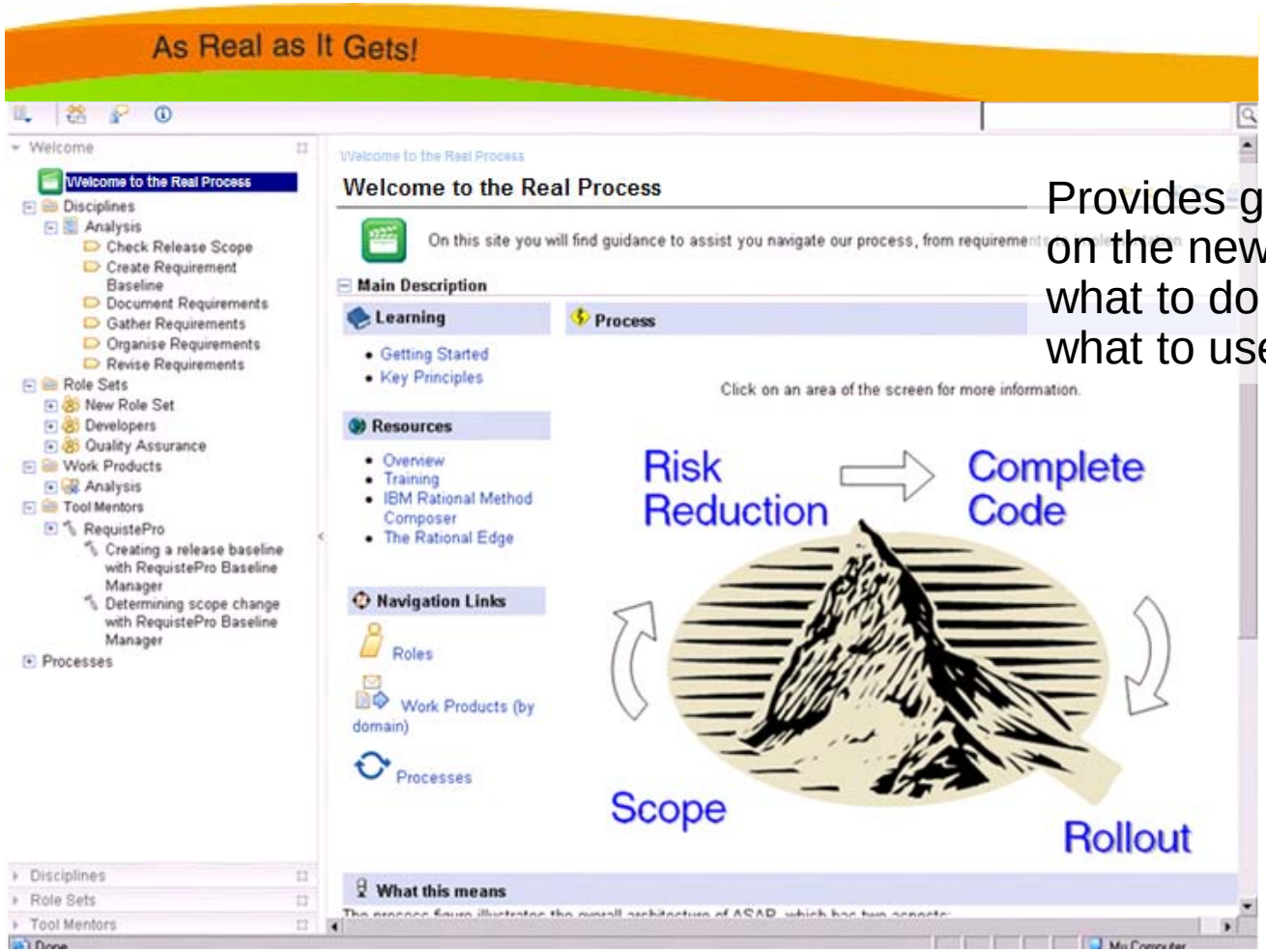
A gradual, cumulative process

- you won't get here tomorrow

The Five Levels of Requirements Management Maturity,
Jim Heumann, The Rational Edge, February 2003

Tool: IBM Rational Method Composer

Process guidance created with Method Composer



Provides guidance on the new process – what to do when, what to use, etc

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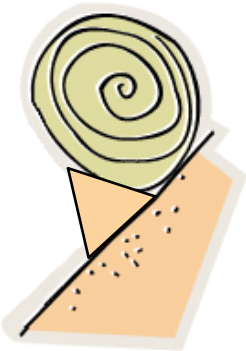

What you can expect:

- Reduced errors in requirements set
- Better management – transparency
- Control of scope creep – cost and schedule
- Fewer bugs going into production and having to be fixed in the next lifecycle
- Quicker testing – traceability
- What you expected to see is there

Questions

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