

REQUIREMENTS MODELLING



WHY MODEL

- Understanding
 - what is expected
 - what is planned
 - how to achieve plan
- Communication
 - technical
 - non-technical

WHAT IS A MODEL

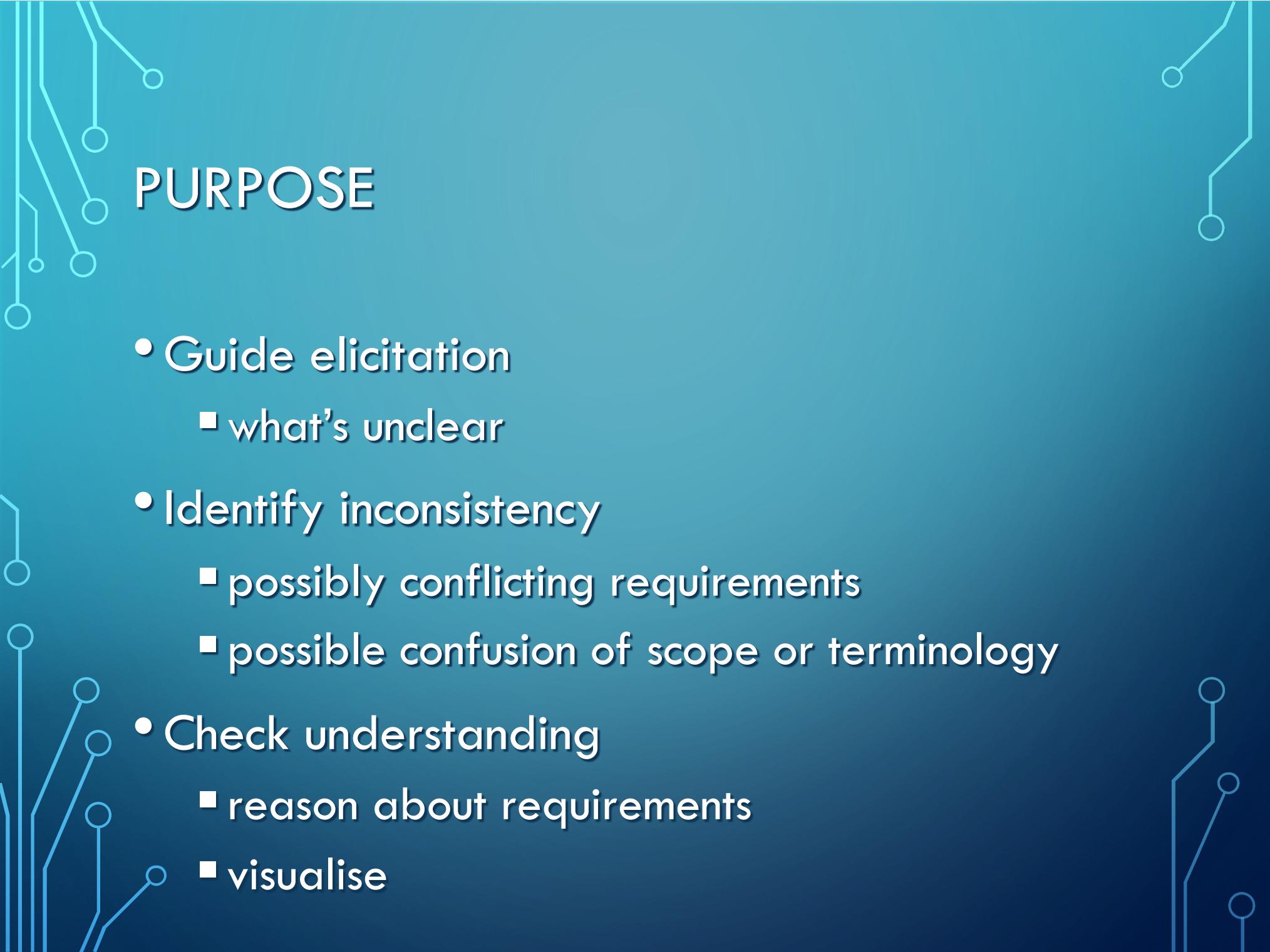
- Simplification of reality
 - highlights important details
 - ignores trivial details
- Complex systems cannot be comprehended in their entirety
 - models help manage complexity

REQUIREMENTS MODELS

- Enterprise
- Goals
- Agents
- Roles
- Information
- Behaviour
- Time
- Qualities
- NFR

WHY MODEL REQUIREMENTS?

- See requirements in context
- Multiple views
 - high-level
 - detail
- See what's missing

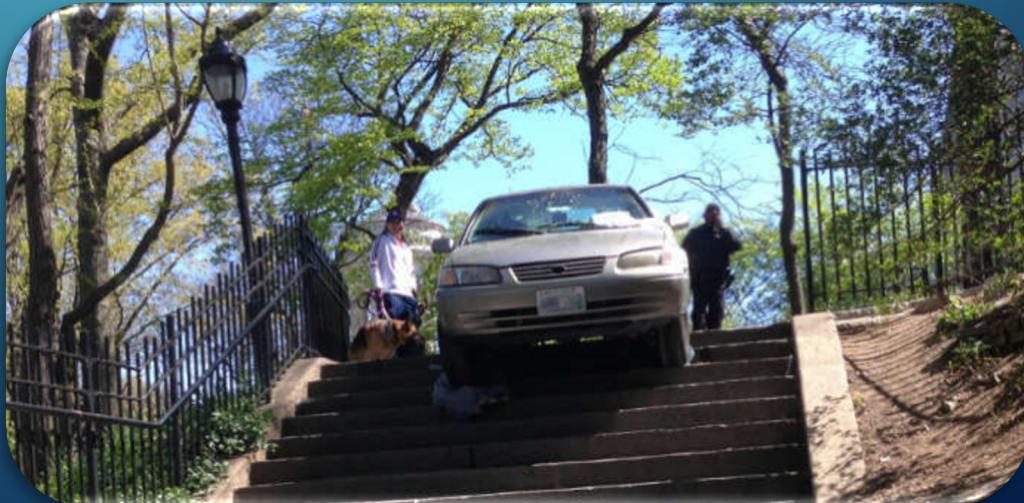


PURPOSE

- Guide elicitation
 - what's unclear
- Identify inconsistency
 - possibly conflicting requirements
 - possible confusion of scope or terminology
- Check understanding
 - reason about requirements
 - visualise

LIMITATIONS

- Models are never perfect
 - missing details from problem domain
 - added constraints not from problem domain
- *If the map and the terrain disagree, believe the terrain*



PRODUCT VS USER CENTRED

- Product-Centred
 - Focus on features to be delivered
 - expect users will use features to complete tasks
- User-Centred
 - Focus on anticipated usage
 - what do users need to accomplish
 - Reveal necessary functionality
 - Assists with prioritisation

MODELLING LANGUAGES

- Natural language
 - expressive & flexible
 - ambiguous
- Semi-formal
 - structure & semantics
 - some analytic techniques
- Formal
 - precise & extensive reasoning possible
 - very detailed

DESIRED CHARACTERISTICS

- Implementation Independent
- Abstract
- Formal
- Constructible
- Analysable
- Traceable
- Minimal

NEXT STEPS

- Requirements Modelling Techniques
 - User Stories
 - structured natural language
 - Use Cases
 - semi-formal (UML)