

Improving secure systems design with security culture.

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Improving Secure Systems Design with Security Culture

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Acknowledgements

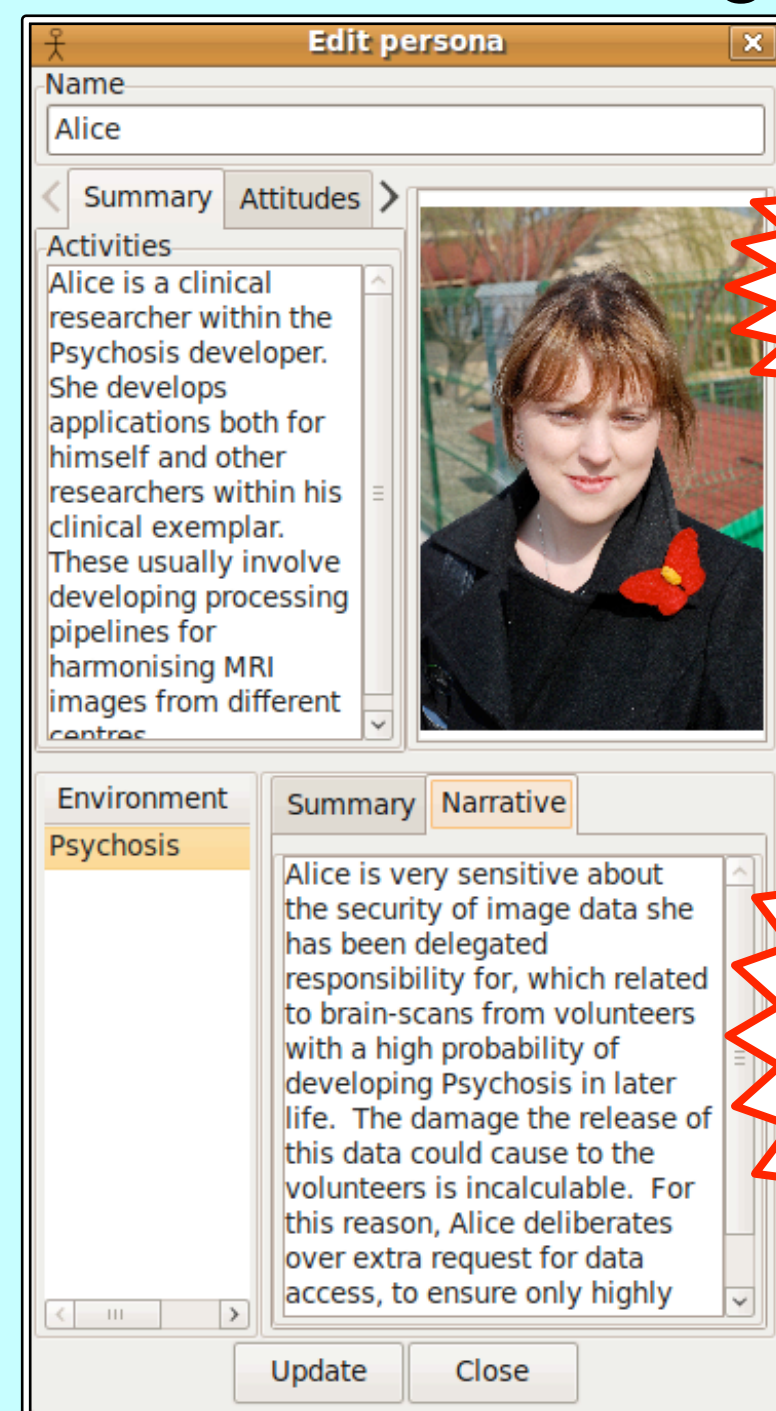
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Sub Cultures

Norms and values
evident when
describing tasks
and controls.
Perceptions vary
between sub-
cultures

Personas and User-Centered Design



Personas are
specifications
of archetypical
users

Contextual
Inquiry used
to elicit
persona, task,
and environment
data

Security
perceptions
strengthen
or weaken
security
culture

Clearly defining
responsibilities
increases
security
perception

Elaborate role &
responsibility
taxonomies

Roles & Responsibility



A system which is secure and usable in one culture may not be in another.

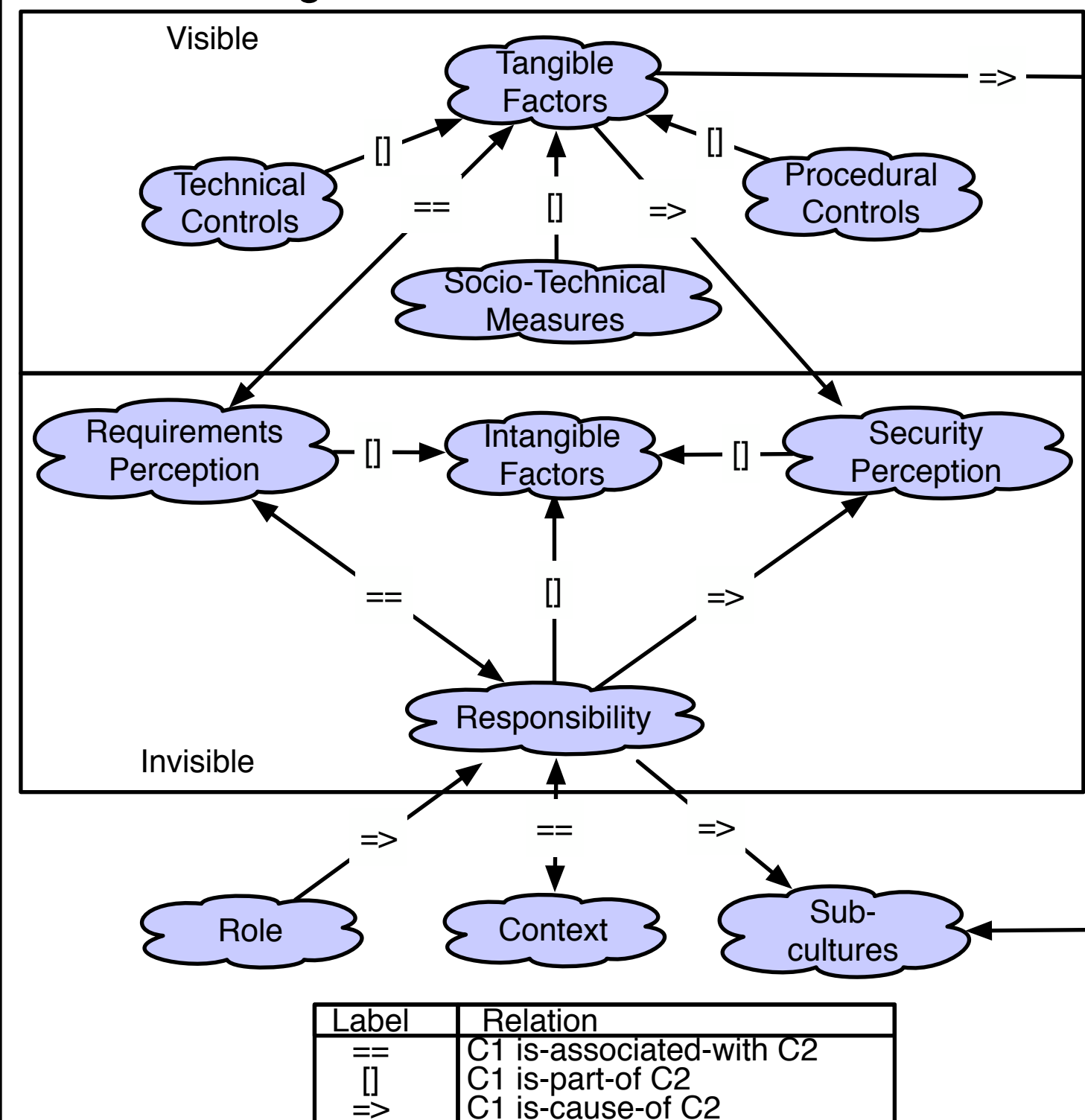


A conceptual model of Security Culture can provide guidelines for informing secure systems design.



Security Culture

The combination of *tangible* and *intangible* factors
within an organisation's culture and its subcultures.

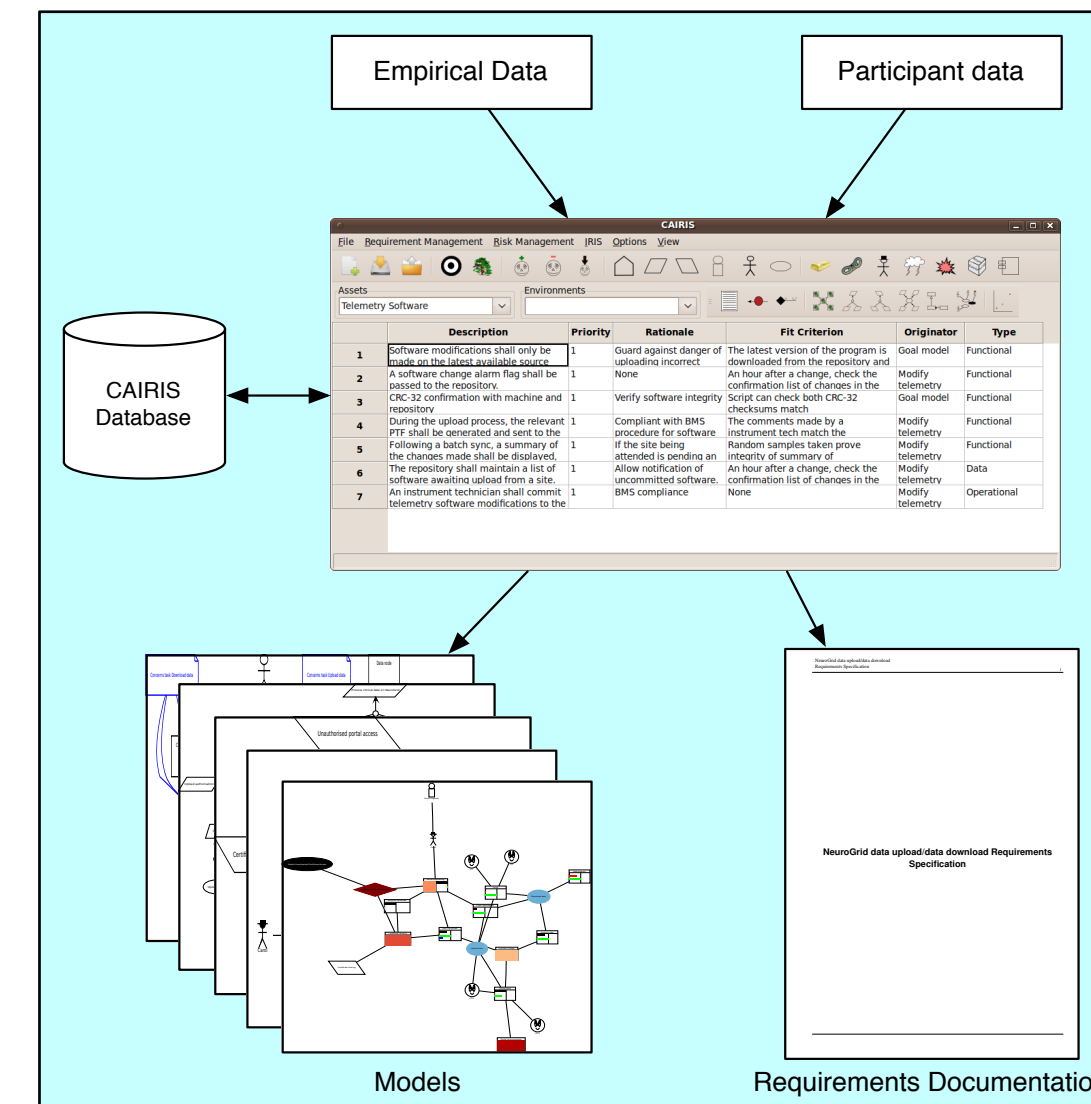


Secure Systems Design

IRIS (Integrating Requirements and Information Security) is a framework for usable secure systems design.

This framework incorporates:

- ✓ A user-centered design process
- ✓ Integrated tool-support

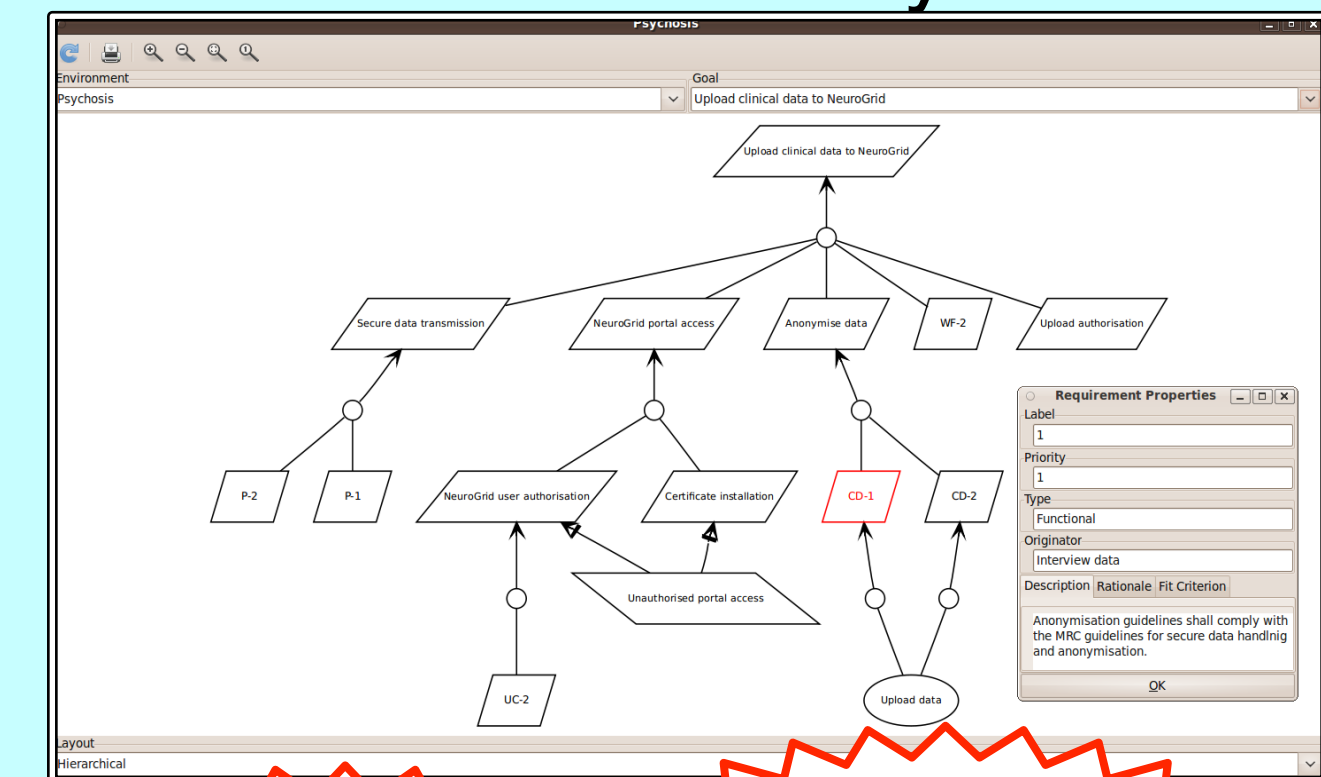


Requirements Perception

Implicit
requirements
cement
security
values.

Indifference
towards
requirements
leads to
ambiguity

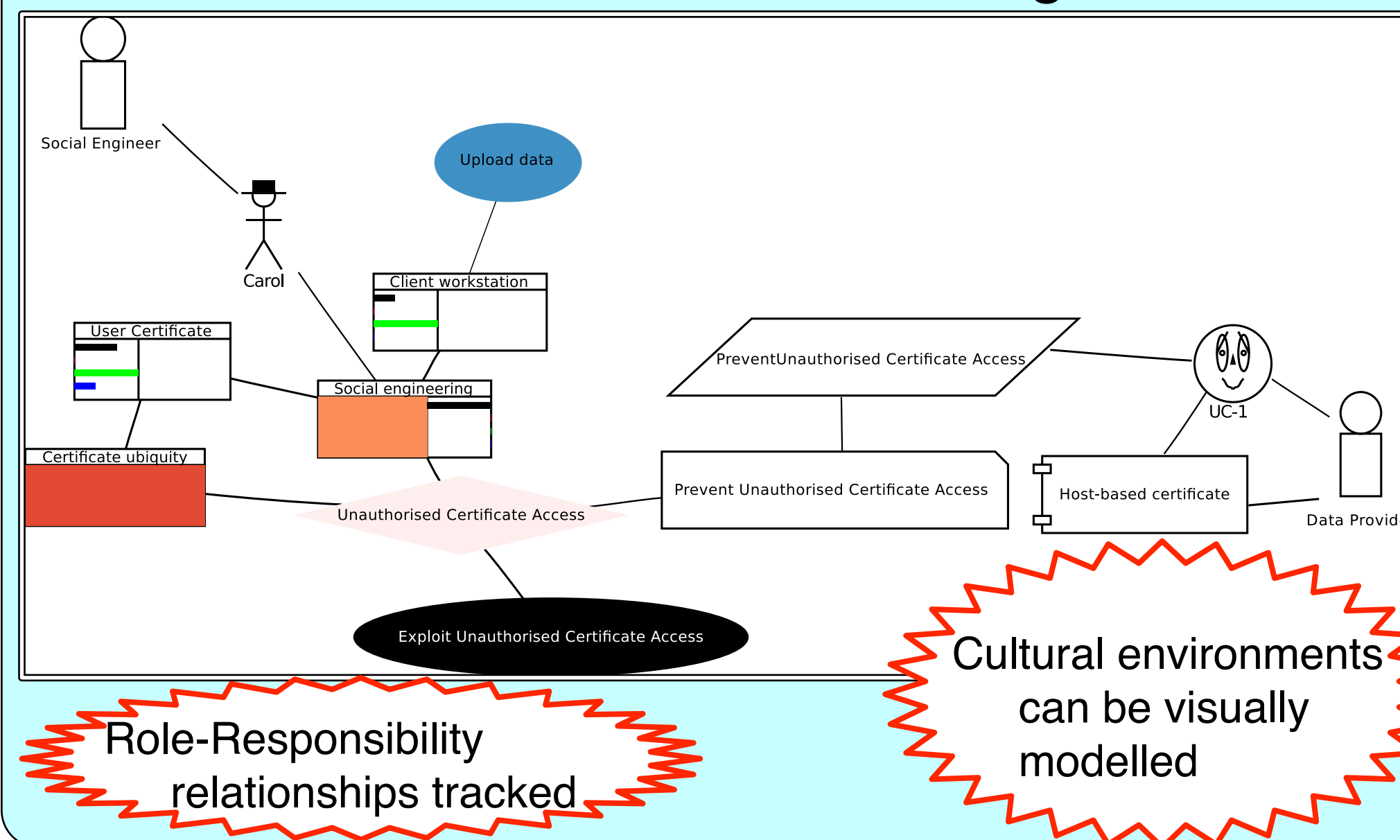
Goal, Requirement, and Task Analysis



Requirements
quality validated
using Chernoff
Faces

Requirements
traceable to
functional, security,
or usability goals

Environment Modelling



Role-Responsibility
relationships tracked

Cultural environments
can be visually
modelled

Operational and
Cultural
Contexts

Shaped by
controls and
values.

Context

Ambiguous
affordances
affect security
perception