

From the soft and fuzzy context to SMART engineering

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Abstract

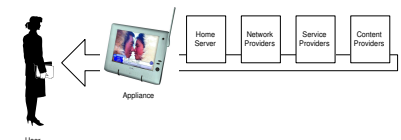
The customer needs are often ill-defined or fuzzy. The need for specific and verifiable requirements is described, but it also shown that less SMART descriptions have complementary value.

A Mobile Display Appliance and Mediascreen are used to illustrate the translation of user experience (fuzzy) into (SMART) device requirements.

Distribution

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The meaning of SMART

- Specific

quantified

- Measurable

verifiable

acronym consensus

- Assignable (Achievable, Attainable, Action oriented, Acceptable, Agreed-upon, Accountable)

- Realistic (Relevant, Result-Oriented)

- Time-related (Timely, Time-bound, Tangible, Traceable)

variation of meaning

What are the requirements for these products?

Mobile Display Appliance

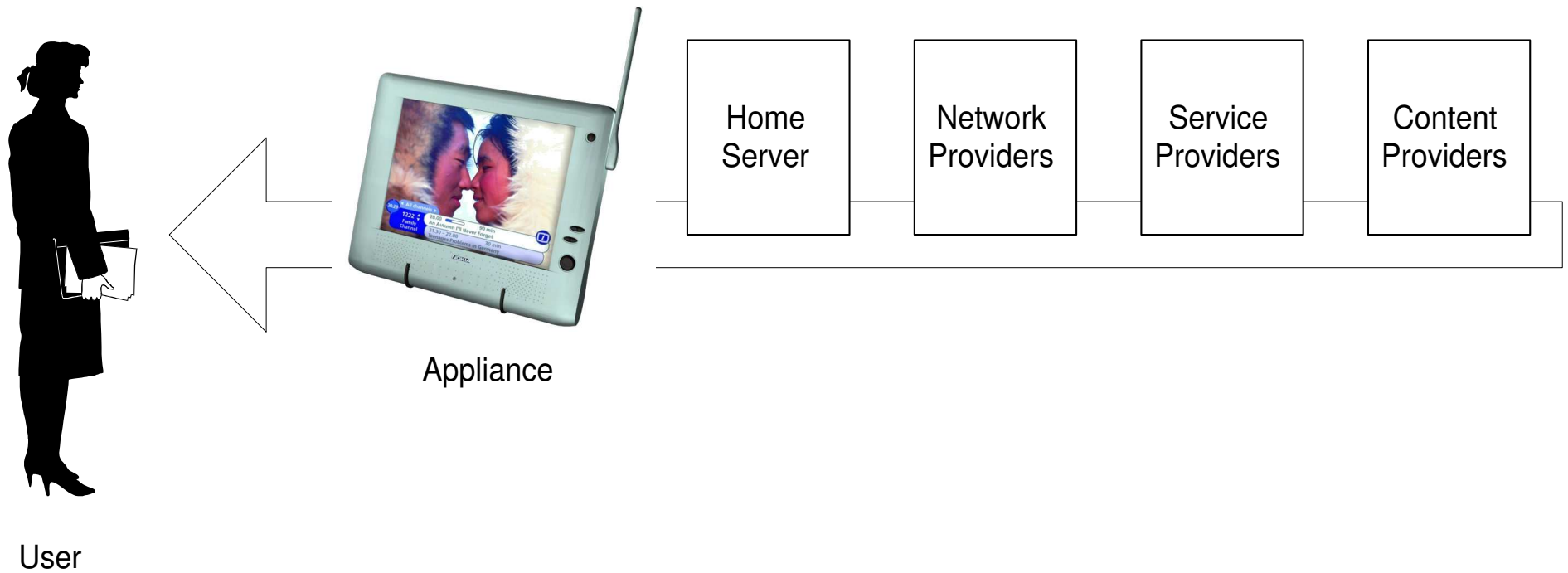


Mediascreen

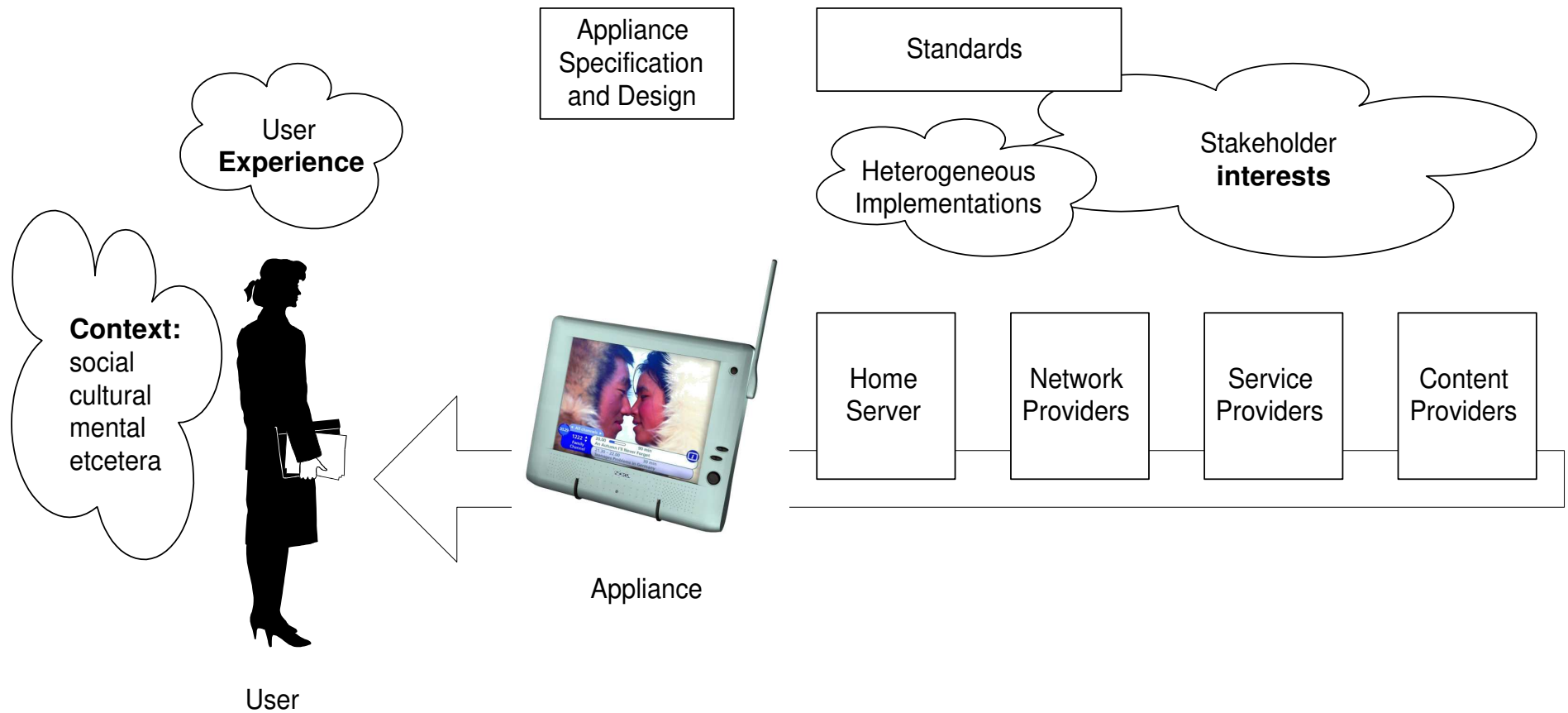


Original pictures from Nokia

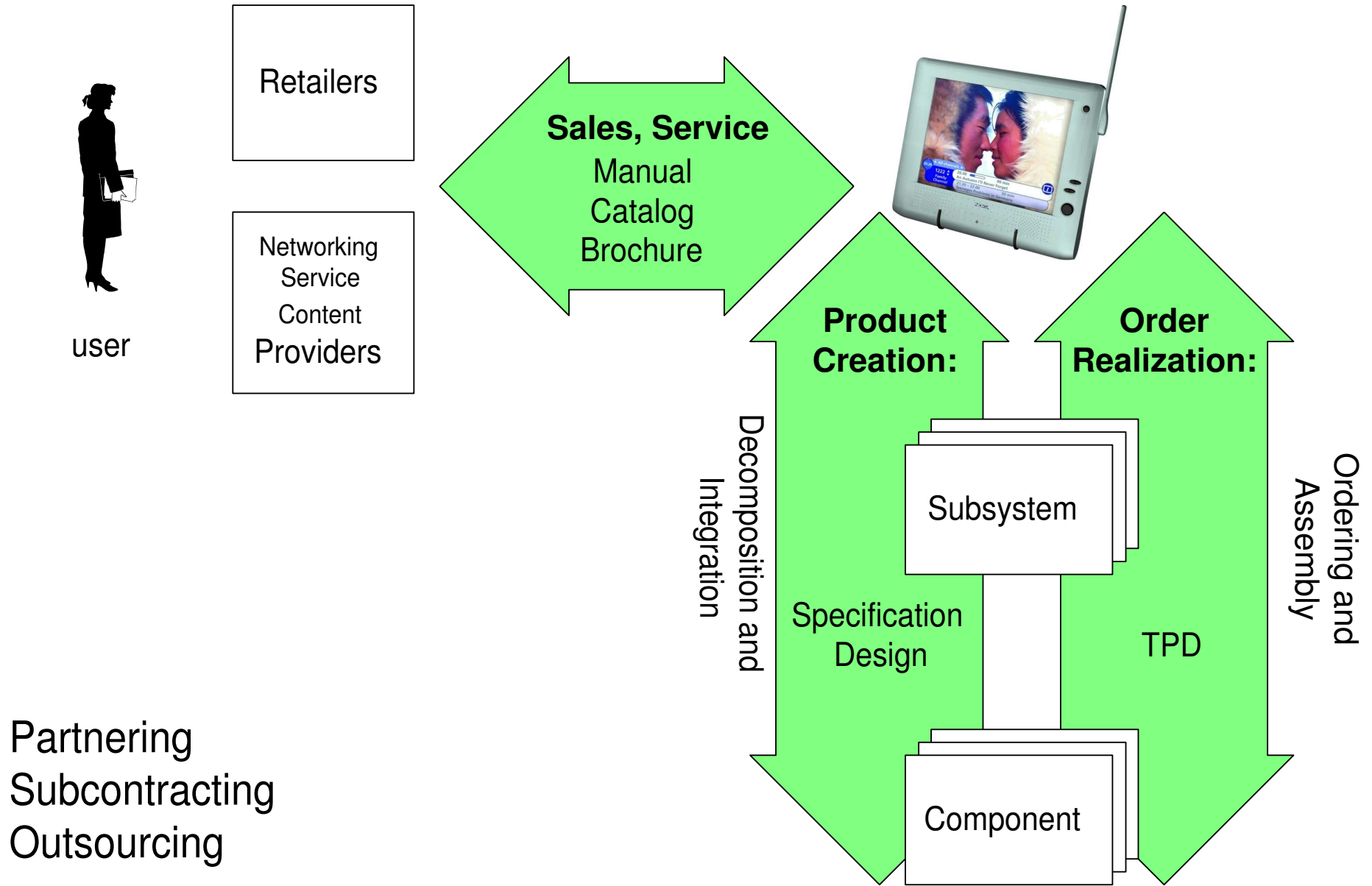
User access point to long foodchain



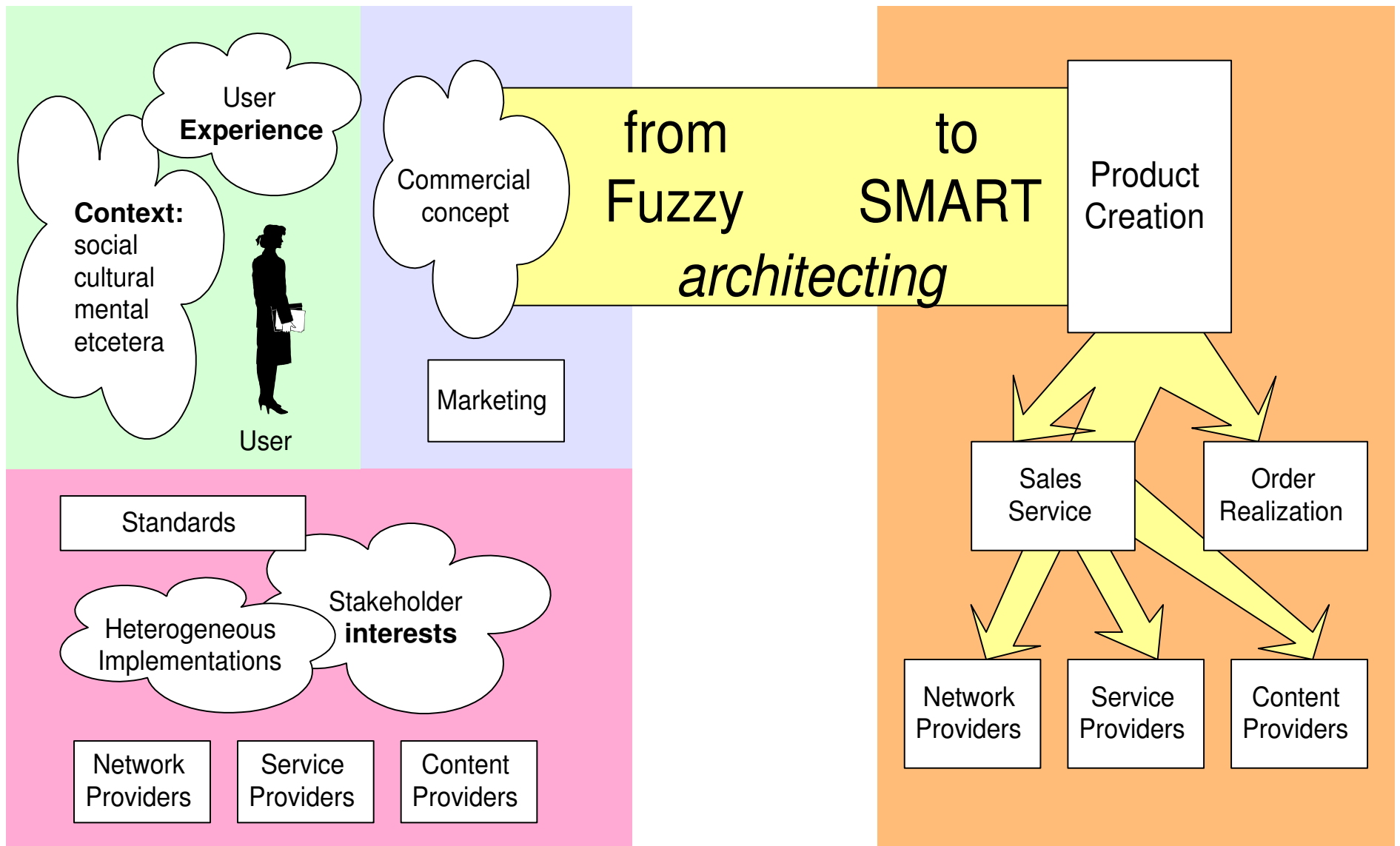
"Fuzzy expectations" and "SMART descriptions"



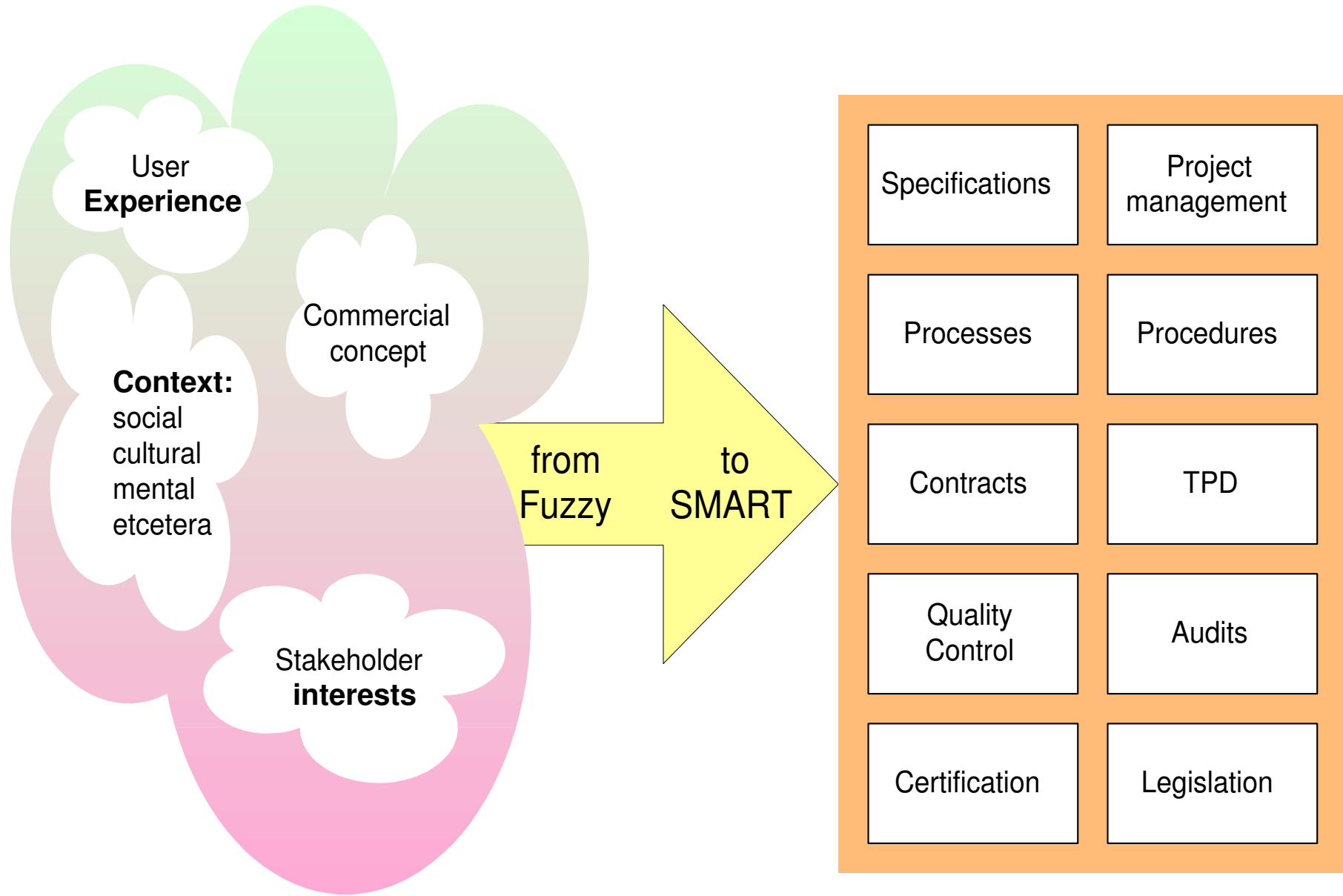
Supply Chain Stakeholders



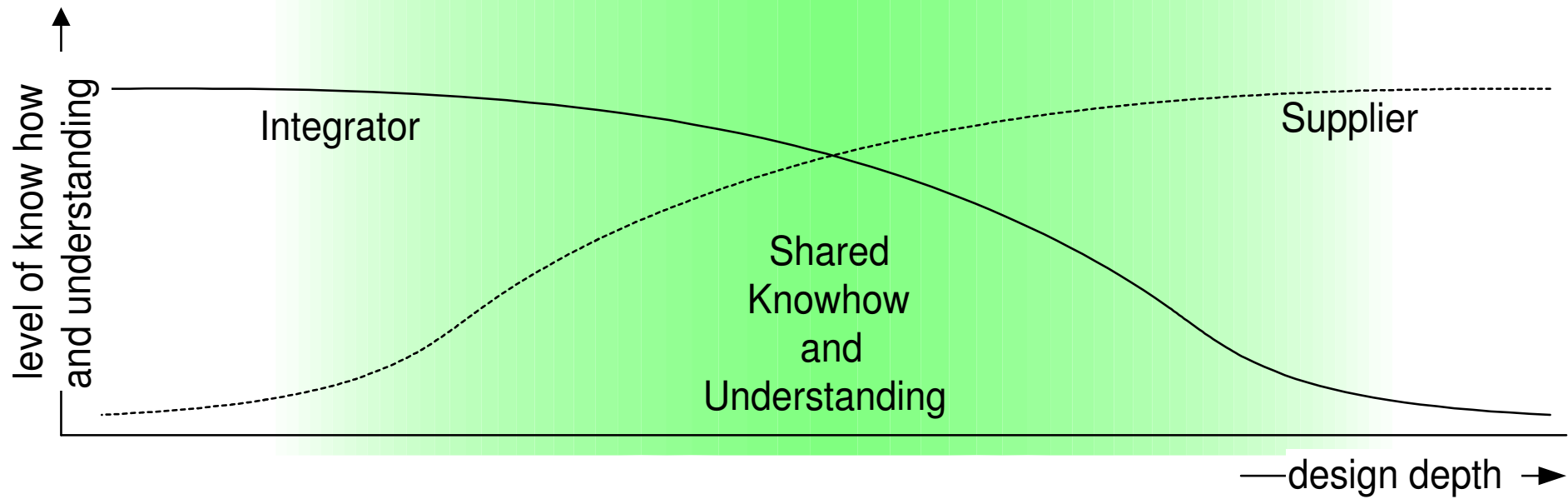
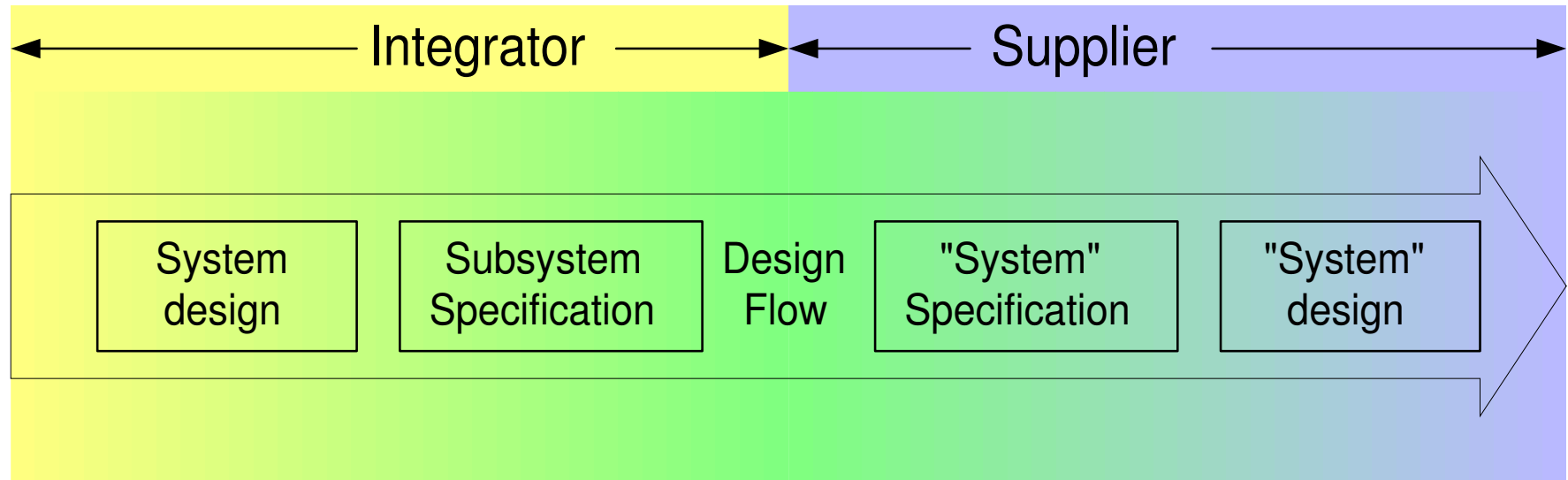
Problem Statement



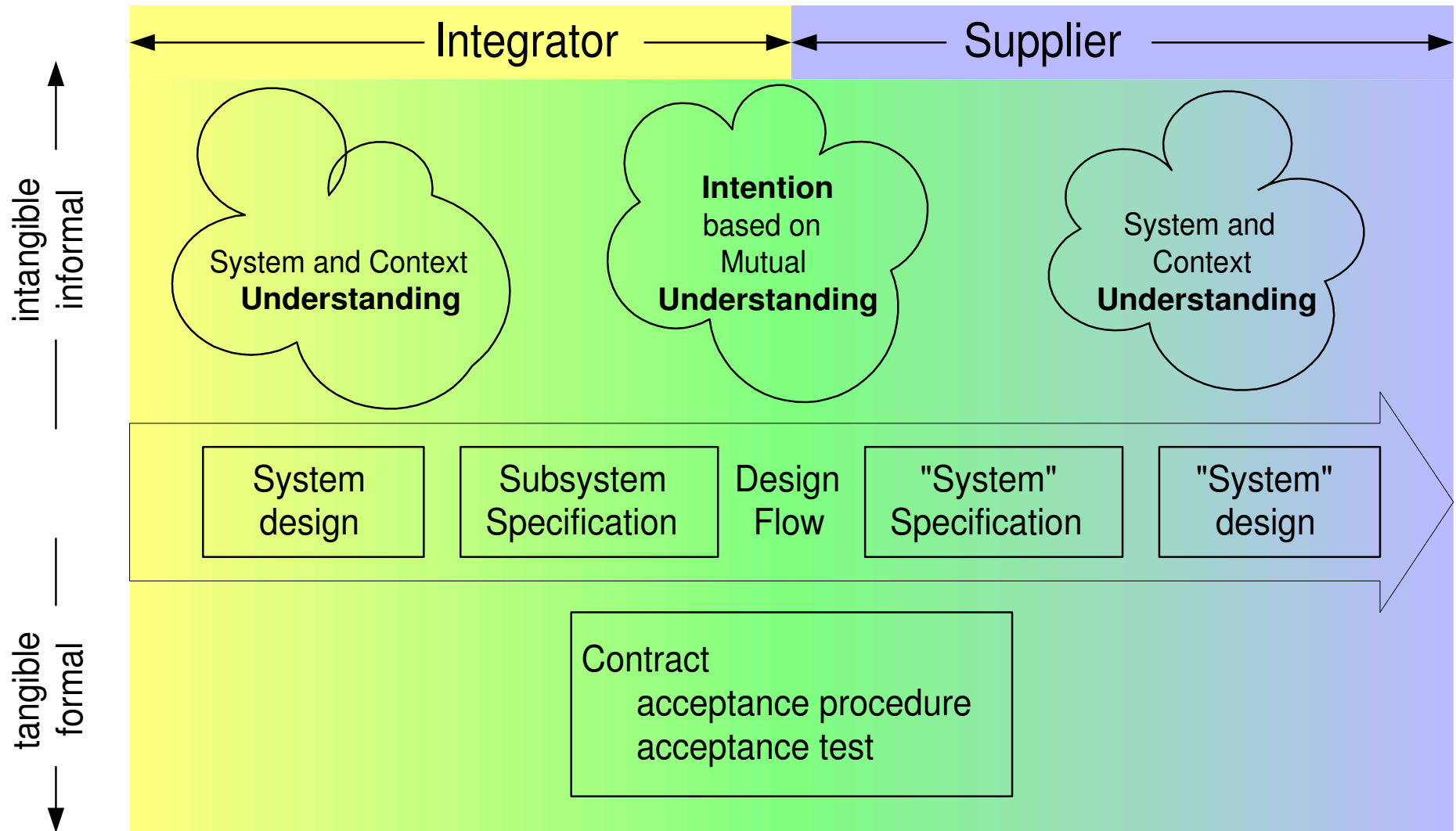
Problem (2): From Imagination to Formalization



Theory: Subcontractors require SMART relation

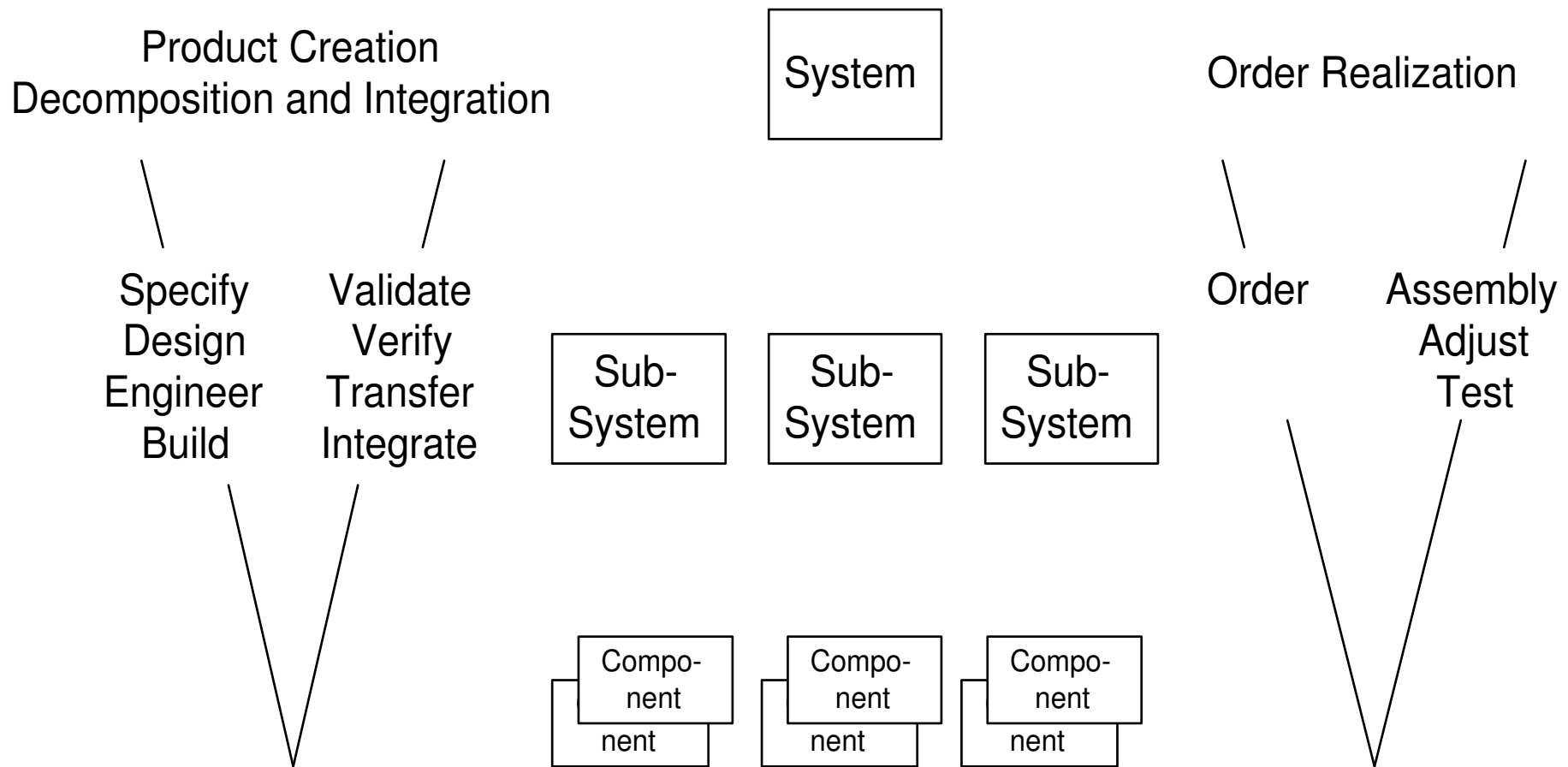


Critical Success Factor: Mutual understanding



Subsystem in Integrator perspective = "System" in Supplier perspective

Views on Aggregation; Why SMART is needed



The "Fuzzy" needs of the User

Fashionable

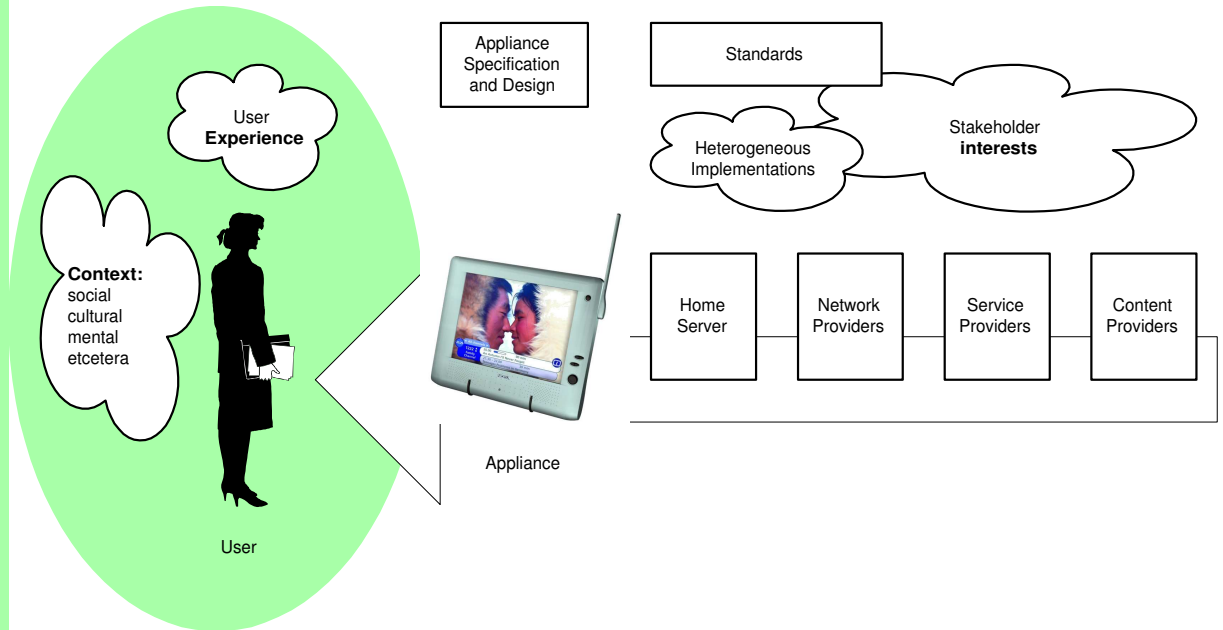
Usable:

- Easy to use
- Portable (small, light)
- Non Obstrusive
- Robust
- Attractive content

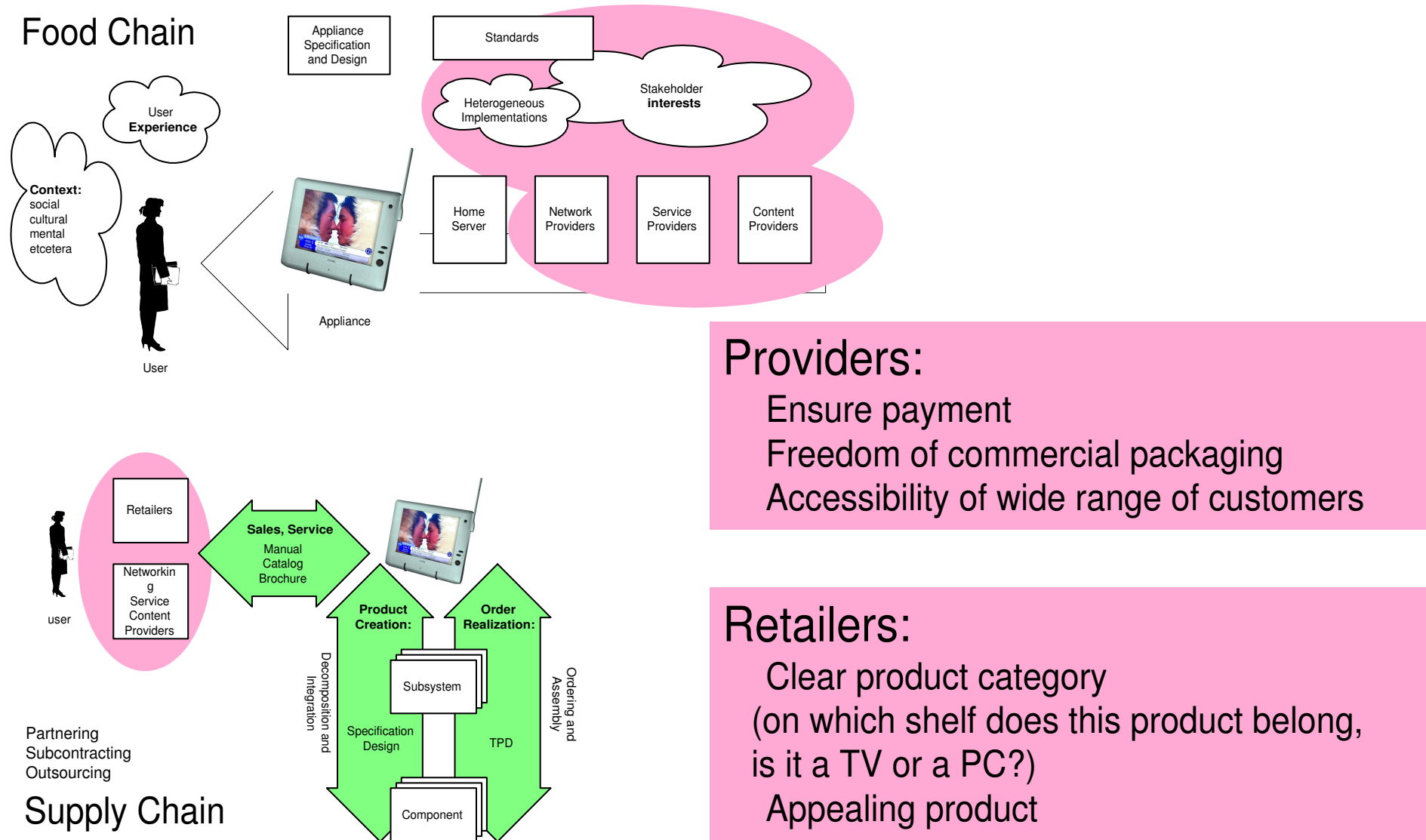
Good Performing:

- Responsive
- Crisp images
- Fluent dynamic images
- Realistic sound

Affordable (integral!)

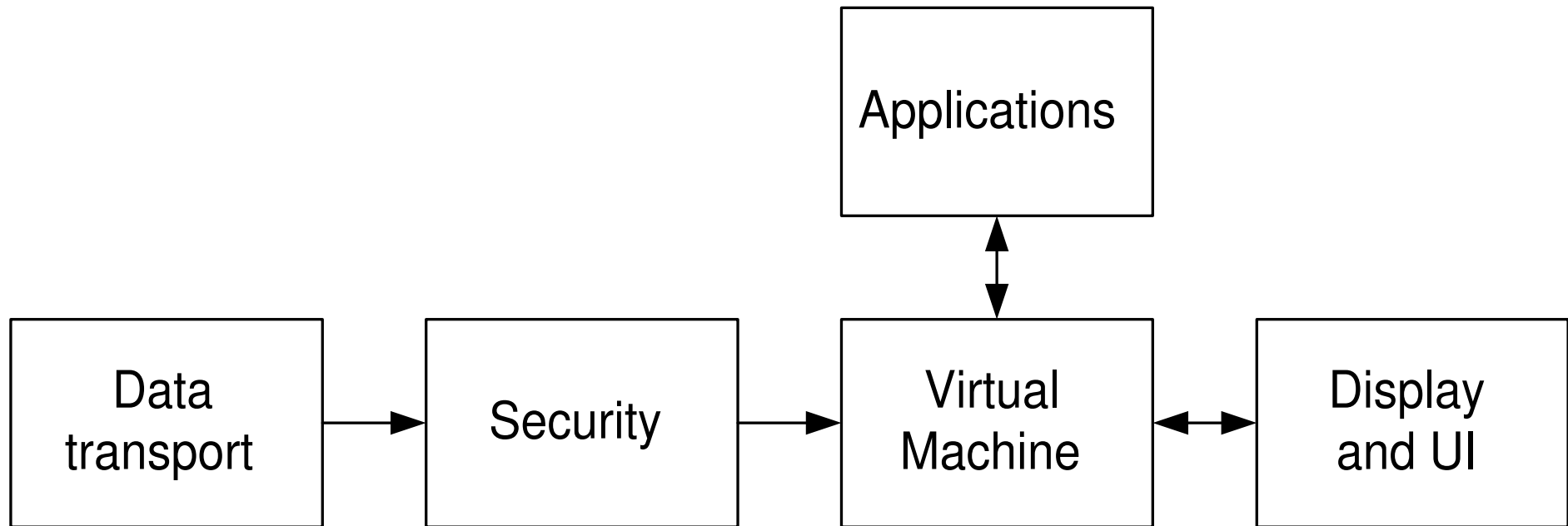


The "Fuzzy" needs of the Provider



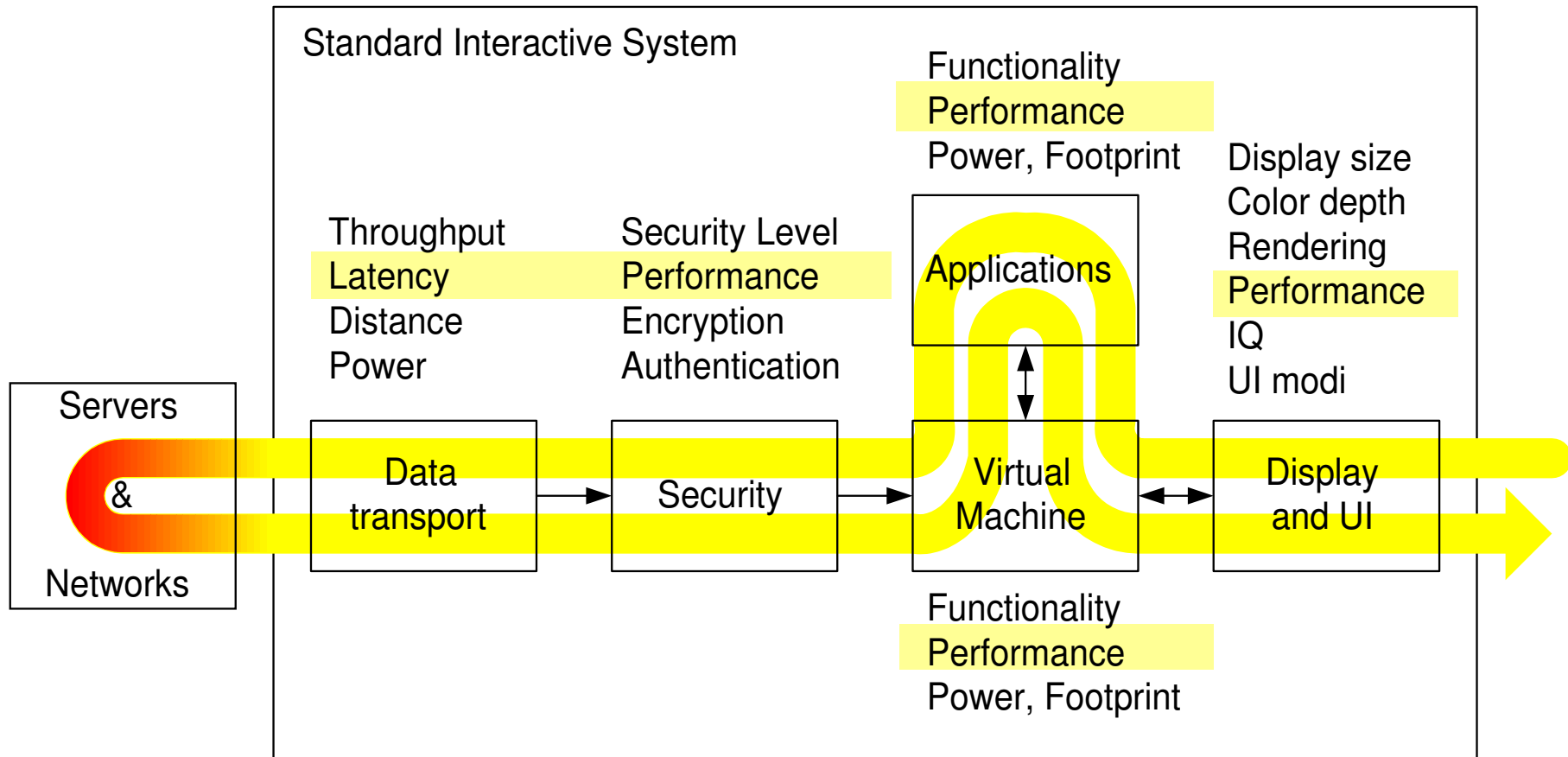
The "SMART" world of the Design

Standard Interactive System



free after Nick Thorne, Philips Semiconductors,
Systems Laboratory Southampton UK,
as presented at PSAVAT April 2001

Specifiable characteristics



Response Time: Latency Budget

times in milliseconds	Message Latency	Response Time
Appliance	40	100
Data transport	10	20
Security	10	20
Virtual Machine	10	20
Application	10	30
Graphics and UI	0	10
Home Network	20	50
Home Server	10	30
Network contention	10	20
Provider Infrastructure	50	160
Last-Mile network	10	20
Backbone network	20	40
Service server	10	50
Content server	10	50
Total	110	310
User need		200

All numbers are imaginary and for illustration purposes only

Interaction or Irritation?

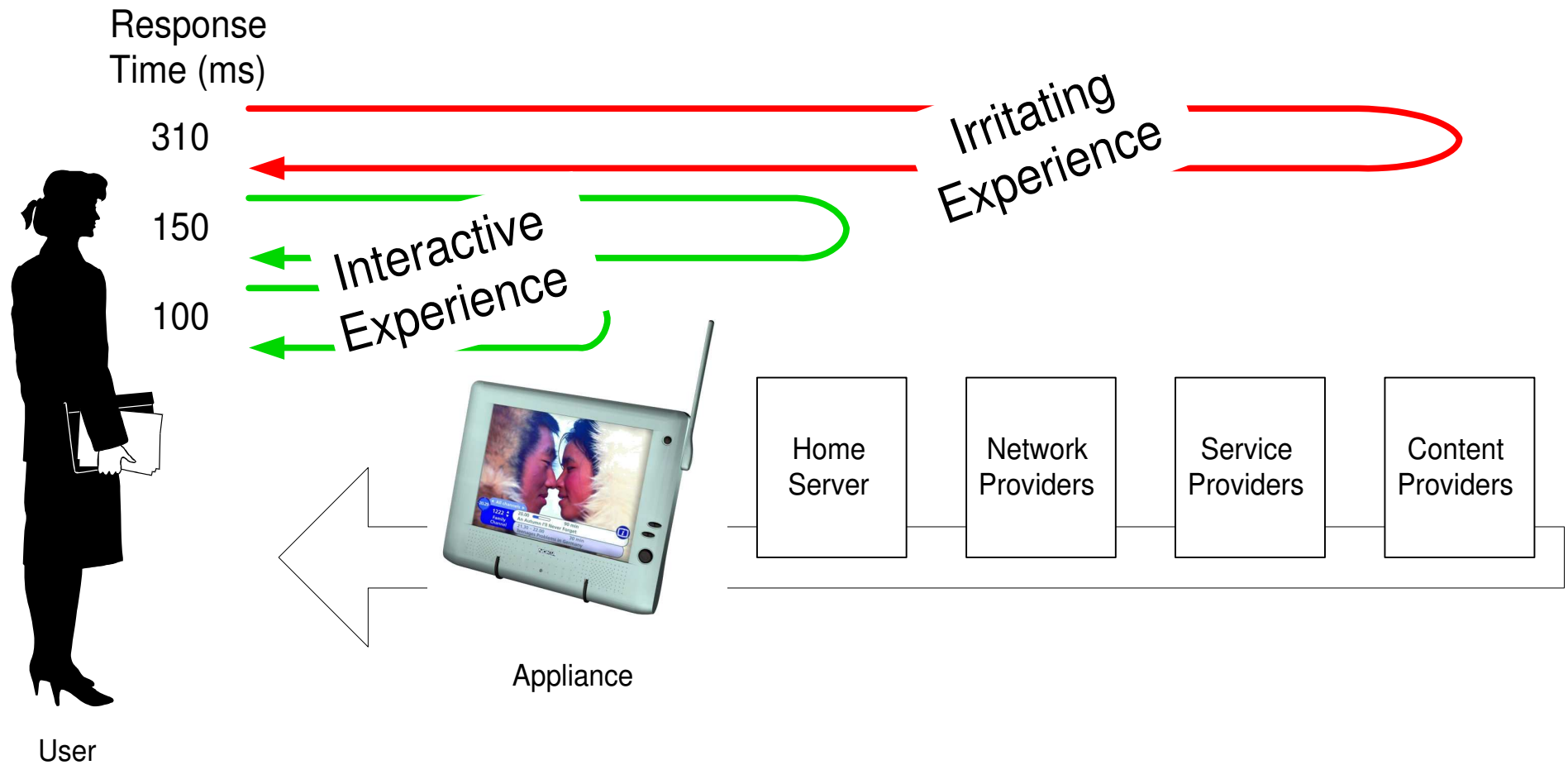
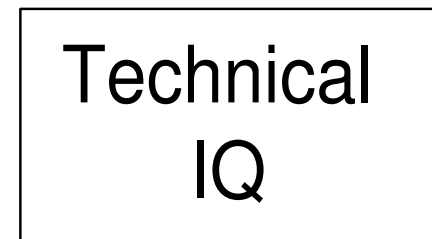
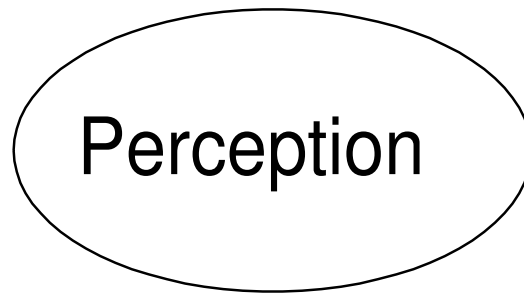
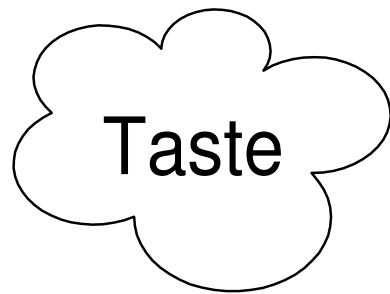
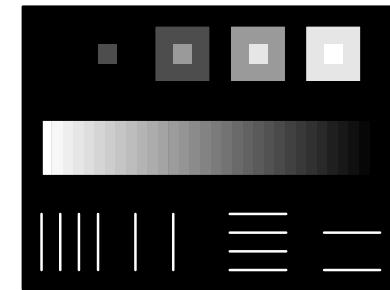
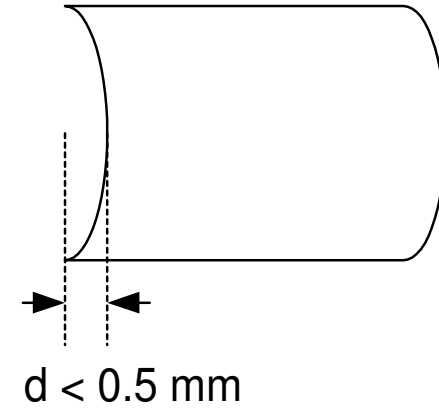
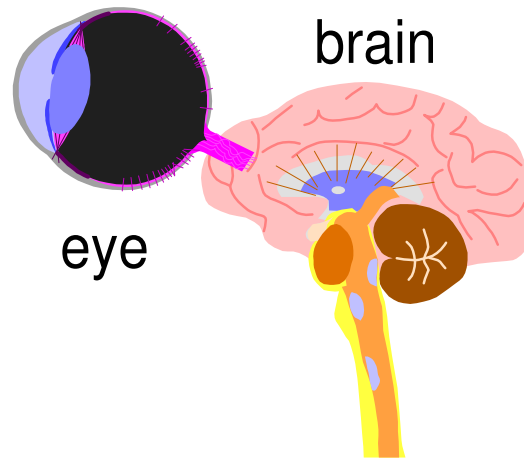
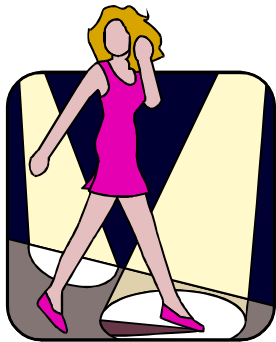


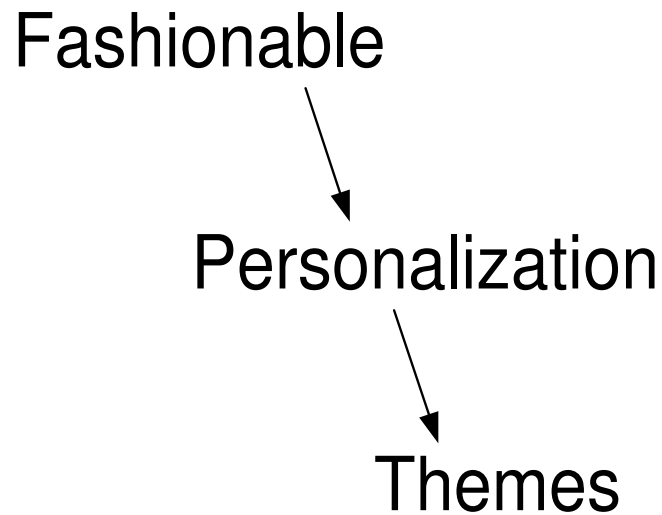
Image Quality



or



Fashionable



Specific
Functionality

Format
Download
Import
Scale

⋮



Inspired by William van der Sterren

From SMART to Fuzzy

Confrontation with market and consumers:

Good

Bad

Enthusiasm

Critical

Instant playing

Stumbling

Relaxed usage

Tension

Buying

Wait and see

Complementing views

