

Quality & Usability.

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HCI-Seminar

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Der Dienst – Gegenwart & Zukunft. Quality.

Paketverluste

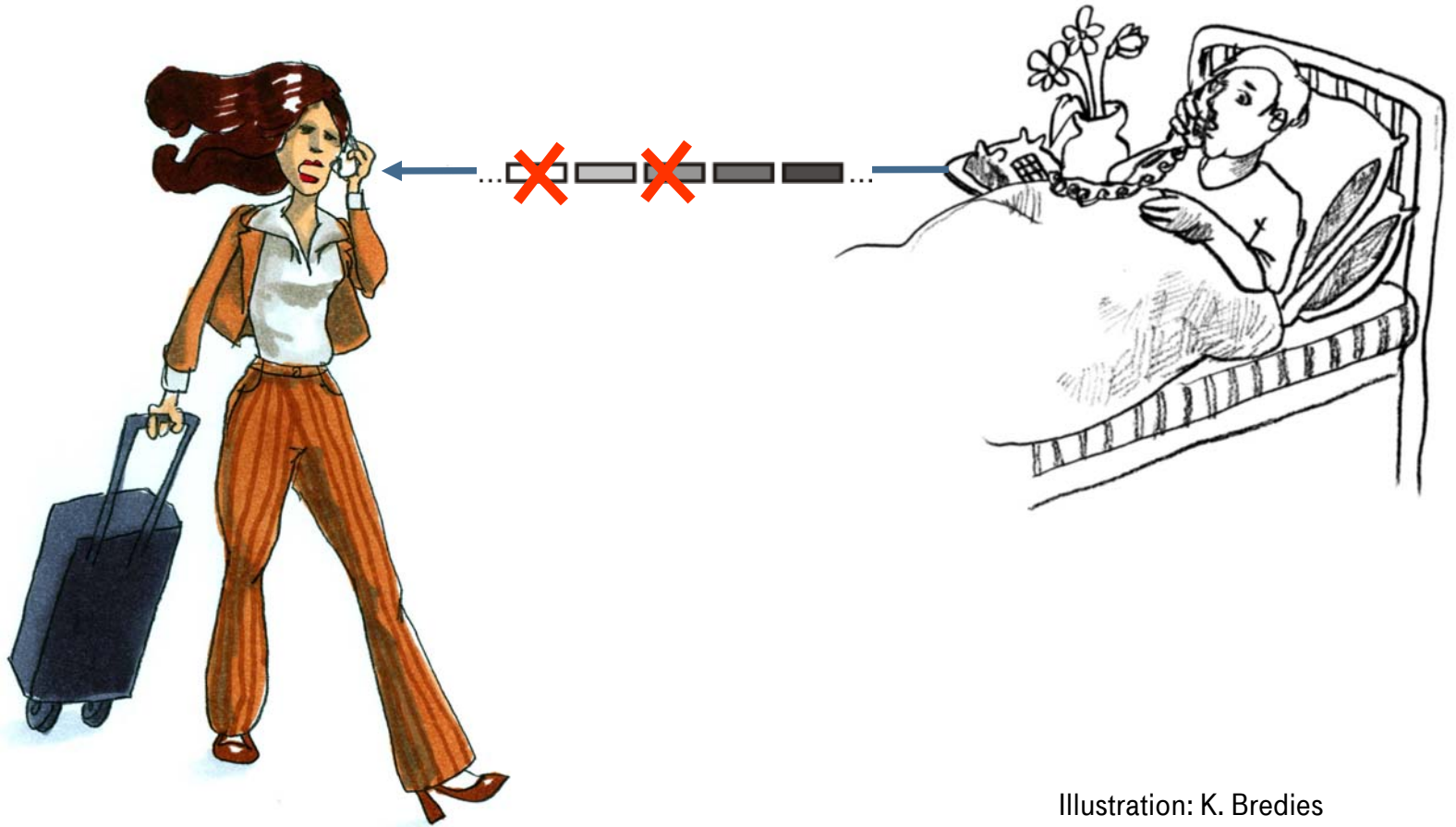


Illustration: K. Bredies

Der Dienst - Gegenwart & Zukunft. Quality.

Breitband-Übertragung



Qualität

Breitband
(50 - 7000 Hz)

Schmalband
(300 - 3400 Hz)

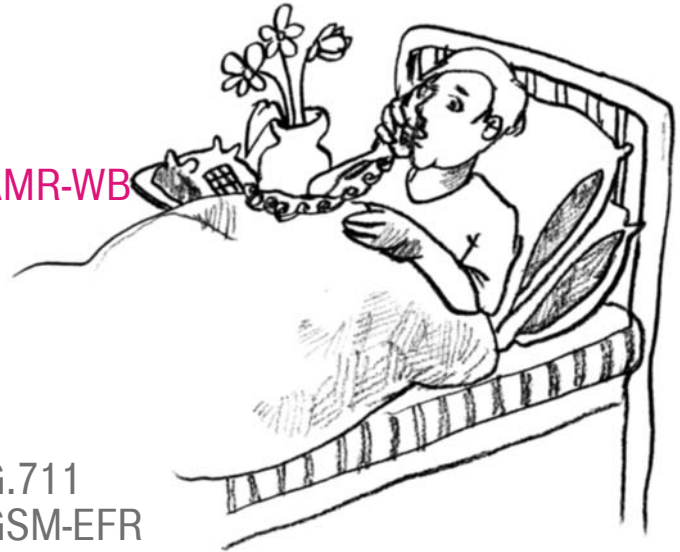
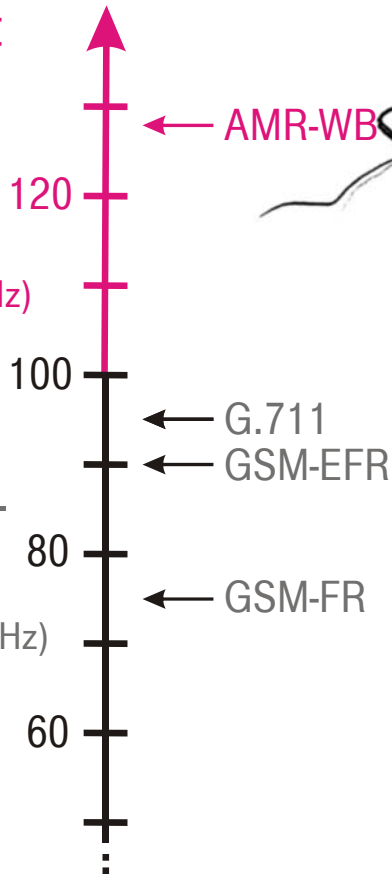


Illustration: K. Bredies

Der Dienst – Gegenwart & Zukunft. Usability.

“...wenn Sie alle Optionen noch einmal anhören wollen, geben Sie 49 ein, wenn Sie den Grund Ihres Anrufs vergessen haben, wählen Sie 50...”



Illustration: K. Bredies



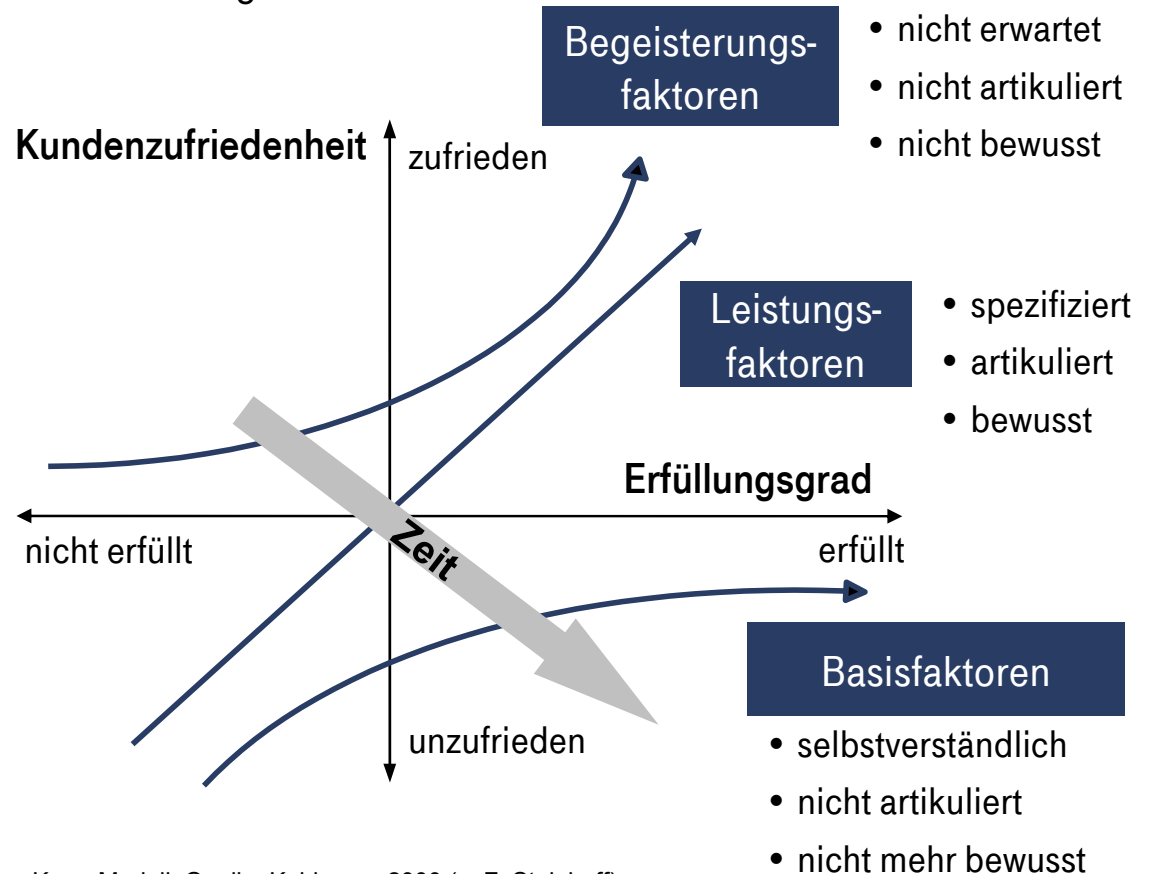
Inhalt.

-
- Dienst
 - Kunde
 - Qualität
 - “Usability” (Gebrauchstauglichkeit)
-

Kunde.

Dienst aus Kundensicht.

■ Dienstyp, Dienstmerkmale & Aufgabe

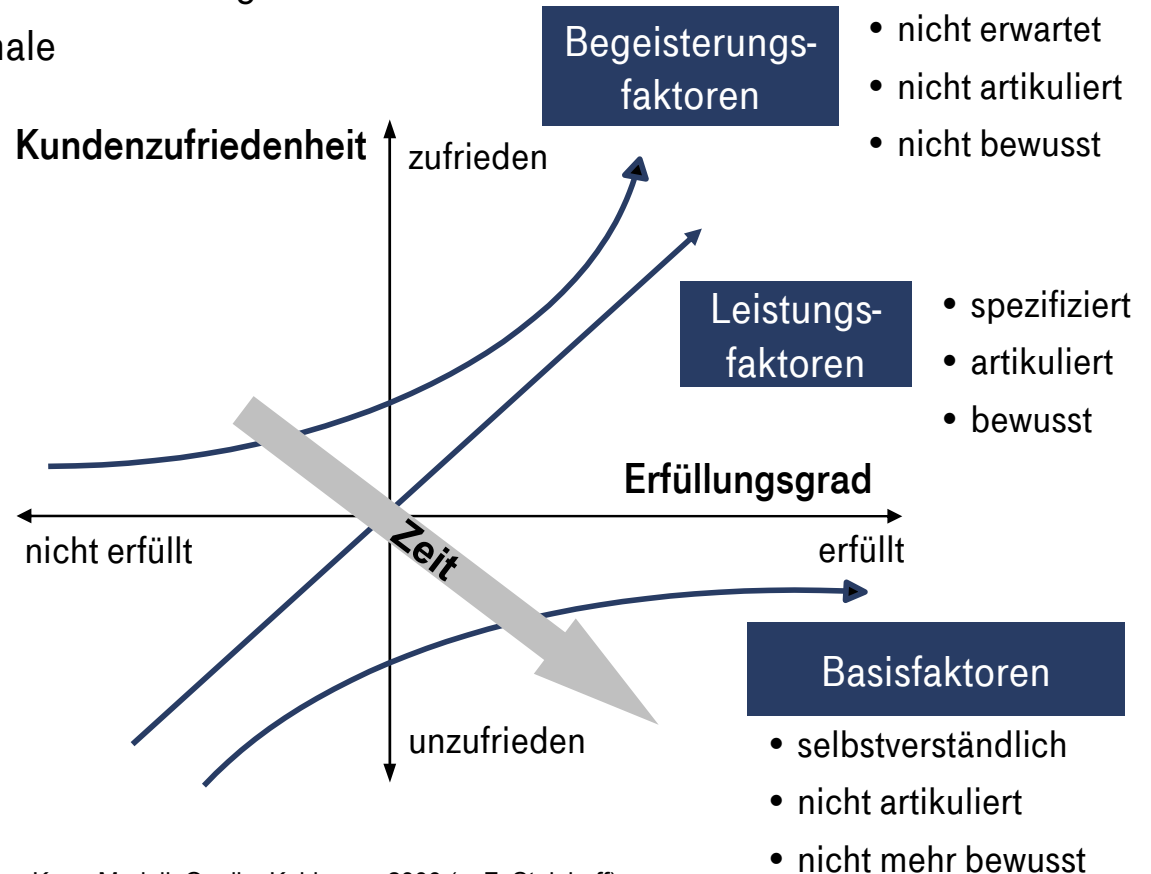


Kano-Modell; Quelle: Kuhlmann 2000 (v. F. Steinhoff)

Kunde.

Dienst aus Kundensicht.

- Diensttyp, Dienstmerkmale & Aufgabe
- Zusätzliche Merkmale



Kano-Modell; Quelle: Kuhlmann 2000 (v. F. Steinhoff)

Kunde.

Dienst aus Kundensicht.

- Diensttyp, Dienstmerkmale & Aufgabe
- Zusätzliche Merkmale
- Preis

Kunde.

Dienst aus Kundensicht.

- Diensttyp, Dienstmerkmale & Aufgabe
- Zusätzliche Merkmale
- Preis
- Sichtbarkeit im Markt

Kunde.

Dienst aus Kundensicht.

- Diensttyp, Dienstmerkmale & Aufgabe
- Zusätzliche Merkmale
- Preis
- Sichtbarkeit im Markt
- Sinneswahrnehmung

Kunde. Dienst aus Kundensicht.



Kunde.

Dienst aus Kundensicht.

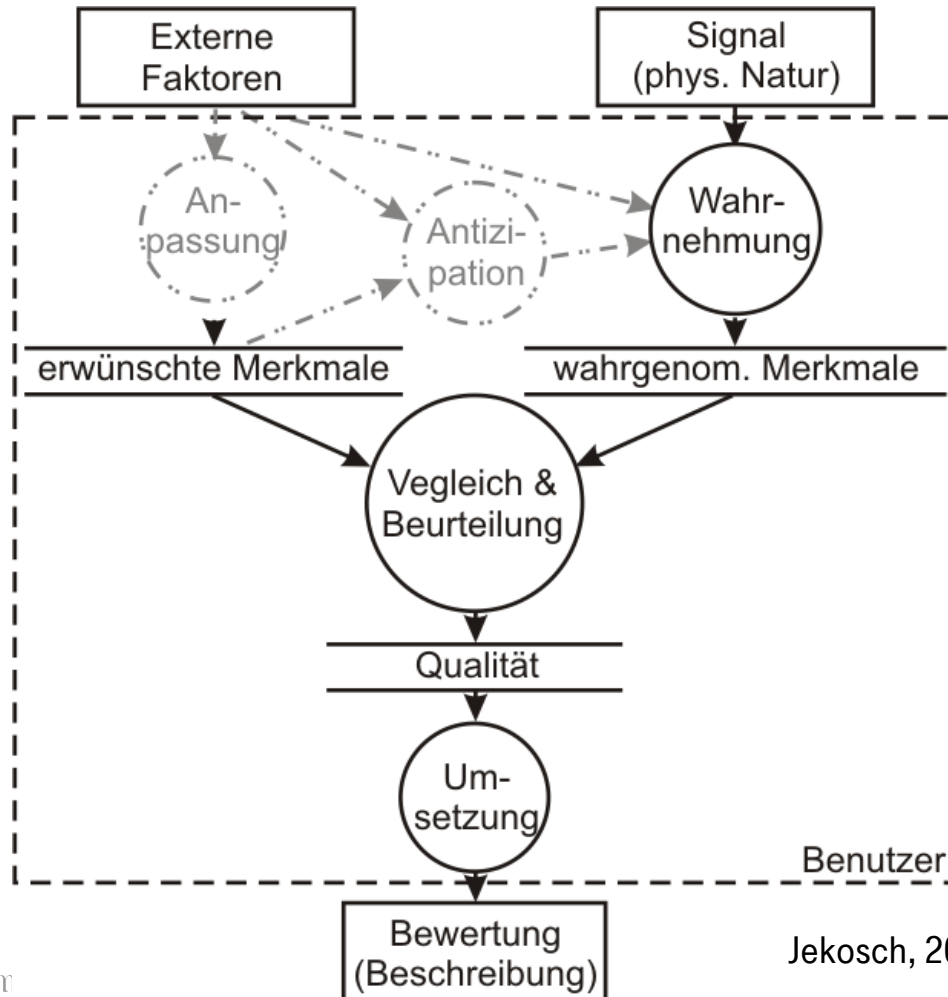
- Diensttyp, Dienstmerkmale & Aufgabe
- Zusätzliche Merkmale
- Preis
- Sichtbarkeit im Markt
- Sinneswahrnehmung – Quality
- Usability
- Kundendienst
- ...

Qualität. Definition.

Ergebnis der Bewertung der **wahrgenommenen** Merkmale
im Hinblick auf die **erwarteten** Merkmale

(Jekosch, 2000)

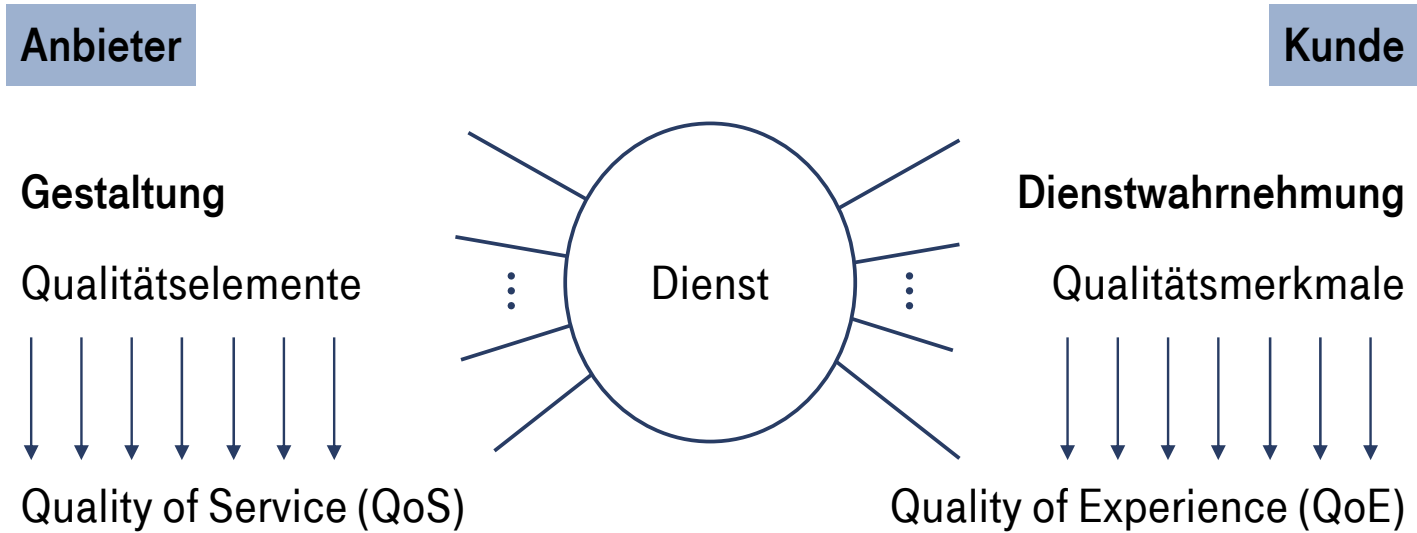
Qualität. Qualitätswahrnehmung.



Jekosch, 2002; Raake, 2006

Qualität.

Gestaltung & Wahrnehmung – Elemente & Merkmale.

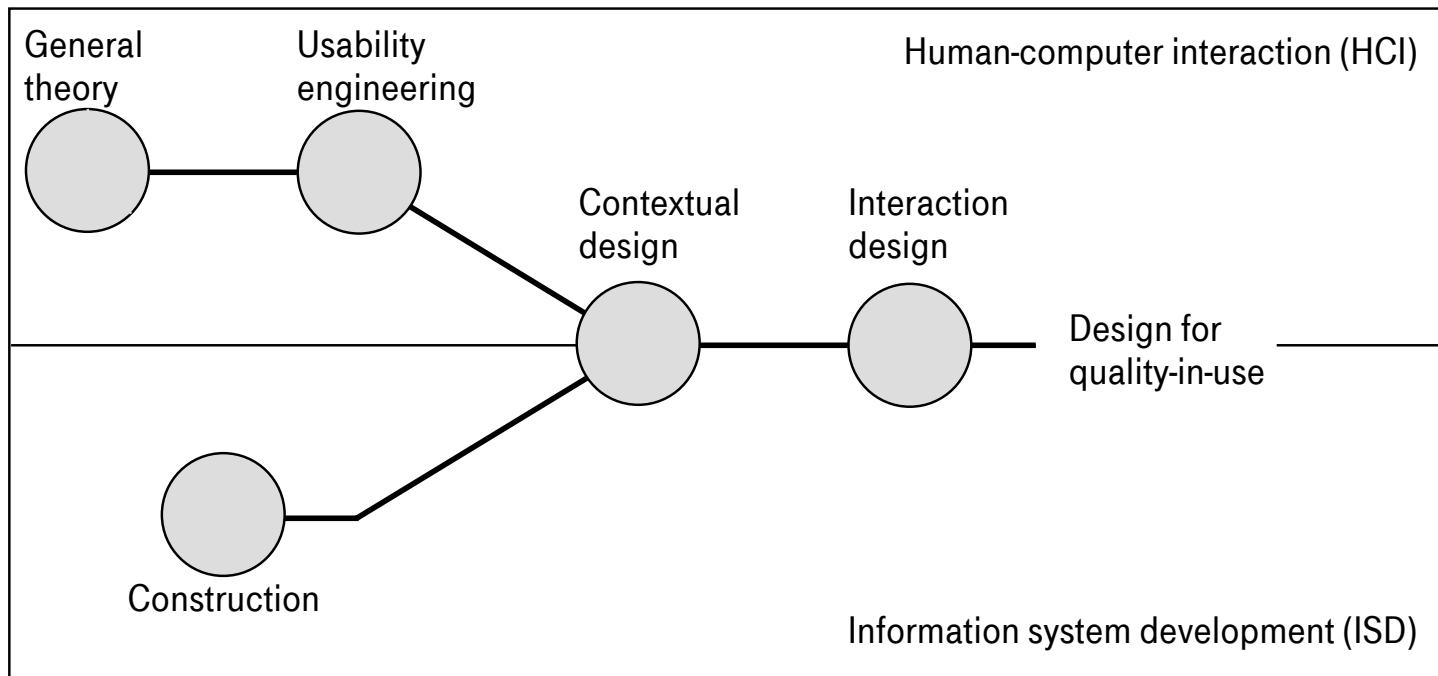


“Usability” – Gebrauchstauglichkeit.

HCI & ISD.

Ehn & Löwgren (Helander, Ch.12):

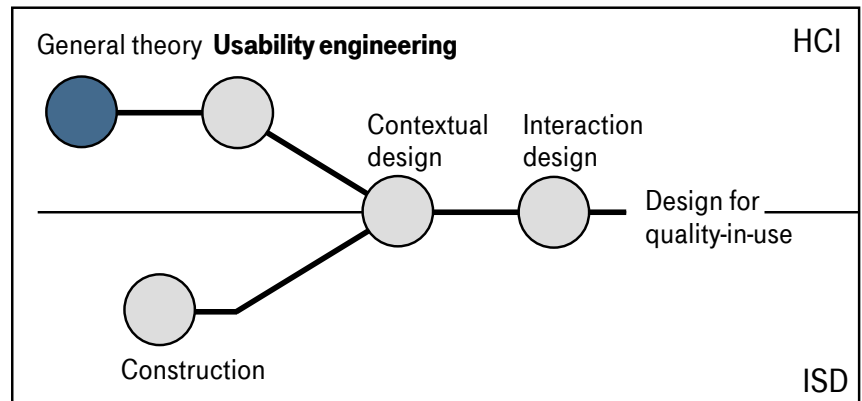
- Design for Quality-in-use



“Usability” – Gebrauchstauglichkeit.

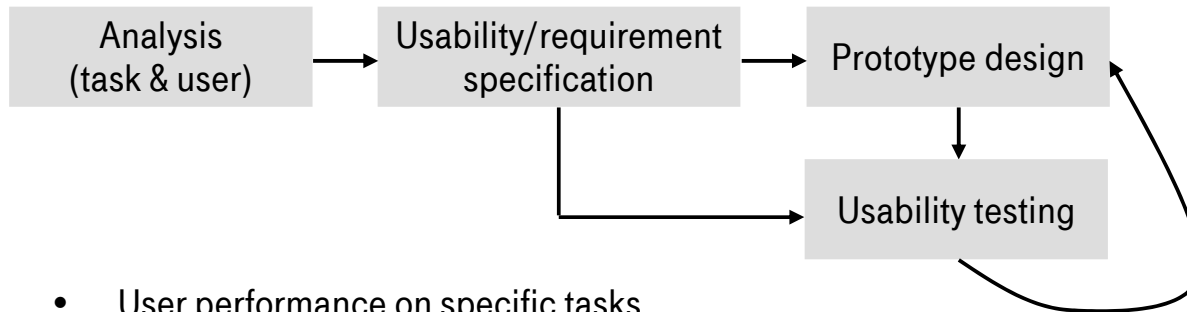
General theory.

- Software psychology, help to arrange interface to make it easy, efficient, error-free, enjoyable (Card et al., 1983)
- Usability as a maximally good fit with general human characteristics (Woods & Roth, 1988)

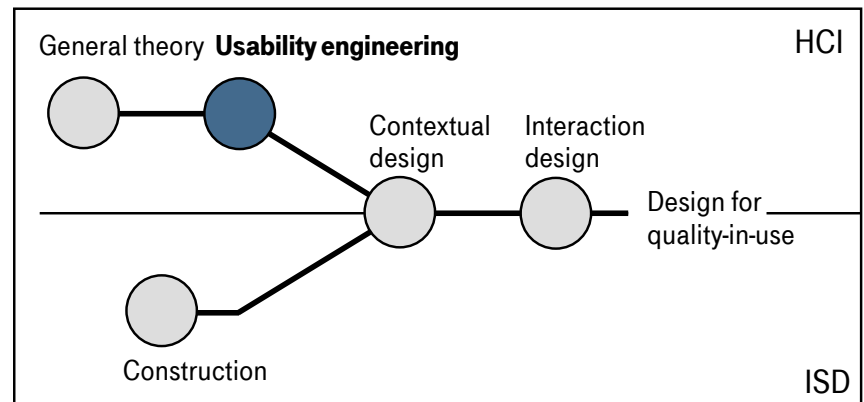


“Usability” – Gebrauchstauglichkeit.

Usability engineering.



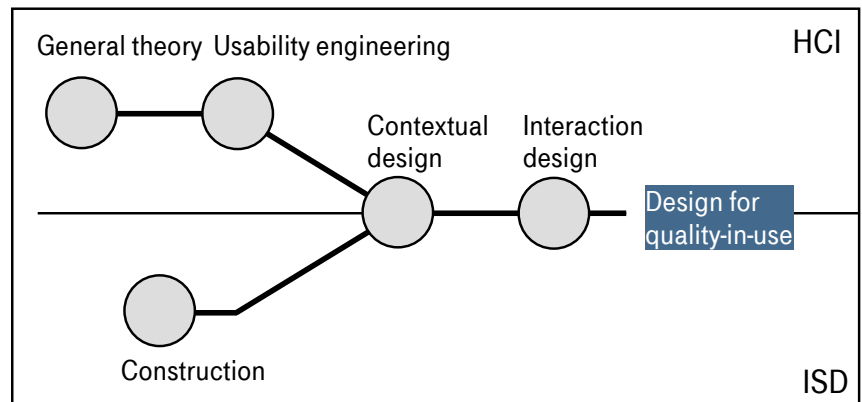
- User performance on specific tasks (completion rate/time, errors, etc.)
- Design flexibility (proportion of users able to perform task)
- Learnability (cf. performance)
- Subjective preference (questionnaires, interviews)



“Usability” – Gebrauchstauglichkeit.

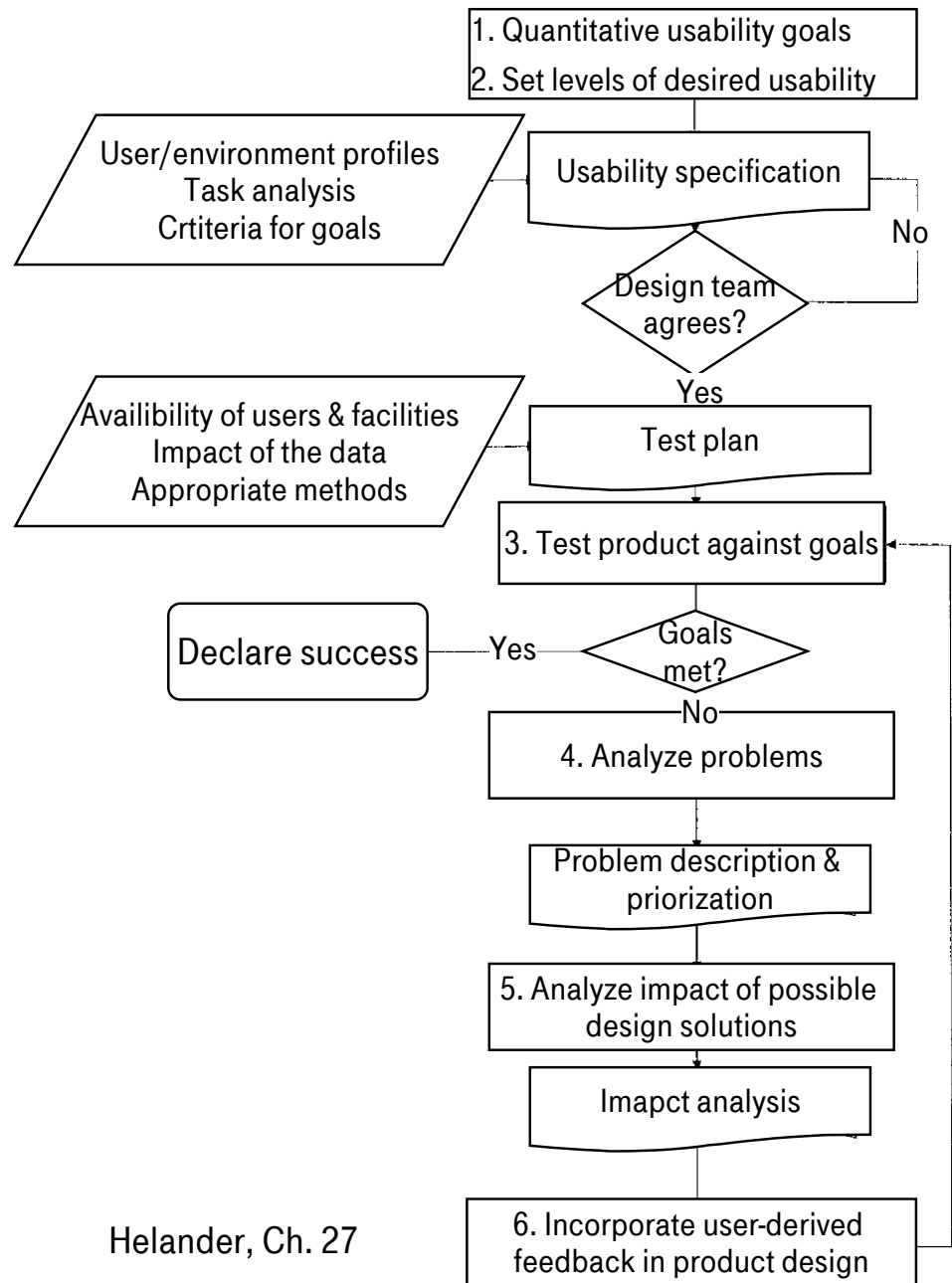
Quality-in-use.

- Three aspects in terms of developer’s main interests:
 - Objective
(Rational, function, etc.)
 - Social
(Society, norms, moral framework, etc.)
 - Subjective
(Aesthetics, emotional & artistic expression)
- Three view-points:
 - Structure
(Hard- and Software)
 - Functional aspects
(Contextual purpose & use situation)
 - Form
(Experience of using system)
- Three criteria for quality-in-use:
 - Constructional
(correctness)
 - Ethical
(used in right way?)
 - Aesthetical
(relative reference)



Usability.

Usability Engineering Framework.



Usability Engineering Framework.

How to do it successfully?

- Selling usability engineering (cost-justification, ROI)
- Planning the effort (resources of time & effort, shering of tasks, communication of results, timing)
 - Tool: Usability engineering plan
- Setting usability goals
 - Specify who users are
 - User classification
 - User behavior
 - Conduct task analysis
 - Information on: Objectives, workflow, etc.
 - Tools: user observation, contextual inquiry, review existing business records, surveys, focus groups, etc.

Usability Engineering Framework.

How to do it successfully?

- Setting usability goals (ctd.)
 - Defining usability attributes
 - usefulness., learnability, efficiency, error rates, memorability, likability,...
 - ISO 9241:
 - System effectiveness
(to what extent can users achieve specified goals in particular work setting?)
 - Efficiency
(how much effort is required to meet usability goals?)
 - Satisfaction
(how comfortable and acceptable do users find the system?)
 - Creating usability specification
 - To be checked with usability tests -> Evaluation!

Usability Engineering Framework.

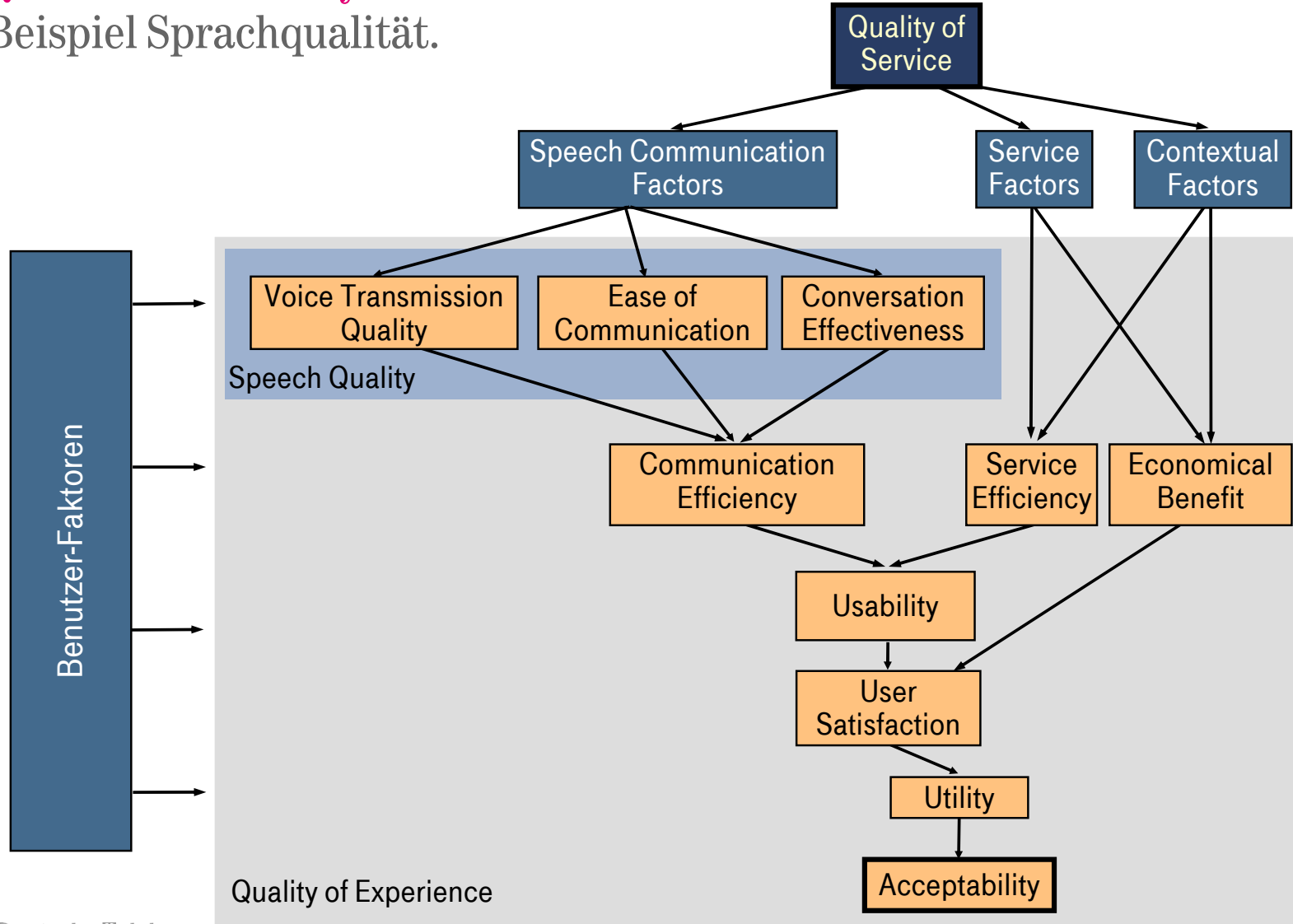
How to do it successfully?

User Characteristics	User Environments:	User Tasks	Important Usability Attributes
<ul style="list-style-type: none"> • Manager in large health care product company • College educated; Significant computer experience • Highly motivated 	<ul style="list-style-type: none"> • Superior technical support • High pay • High pressure, many people depend on you for quick response 	<ul style="list-style-type: none"> • Supporting decisions • Accessing large databases 	<ul style="list-style-type: none"> • Satisfaction • Error rates • Efficiency of use
<ul style="list-style-type: none"> • Clerk in a large financial corporation • High school education • Limited training 	<ul style="list-style-type: none"> • Limited support • Low pay • Many interruptions during the day • Hierarchical organization 	<ul style="list-style-type: none"> • Many different tasks including: typing memos, keeping calendars, electronic filing, out purchase requests... 	<ul style="list-style-type: none"> • Satisfaction • Ease of learning
<ul style="list-style-type: none"> • Network manager of a mid-size corporation • Superior knowledge of computing system 	<ul style="list-style-type: none"> • Many crises during the day • Many users on the system • Tight training budget 	<ul style="list-style-type: none"> • Installs many products each week • Answers questions for many products 	<ul style="list-style-type: none"> • Efficiency • Ease of installation • Satisfaction • Consistency among products

Helander, Ch. 27

Qualität & Usability.

Beispiel Sprachqualität.



Danke!

Fragen?