design process (based on an approx. 15 week project)

systematic planning and timetable

motivation / idea / brief / problem

"what shall be achieved?

## preliminary task

primary goals: what must be achieved secondary goals: what should be achieved timetable (flowchart/etc.)/ scheduled procedure

analysis / research / information

history of the product, problem, etc. market research (design discussion. prices, etc.) - (mood (image) boards - sector (quadrant) charts) trend analysis - (mood (image) boards - sector (quadrant) charts - mappings) focus group analysis and -definition, human factors, (photo- or film documentation, interviews)

positioning / segmentation - (sector (quadrant) charts)

product analysis / funktion analysis / system analysis fault analysis

ergonomic / usage - analysis (photo- or film documentation, interviews)

user-groups - user context - usage context analysis (photo- or film documentation, interviews) technical and engineering aspects (with respect to the usage, manufacturing, etc.) -preparation -use (operation, exchange, montage)

economic aspects ecologic aspects socio-cultural aspects etc.

system sub system  $\perp$  sub system

system analysis

(inter-disciplinary)

component

sub sub component component

(selection of activities)

3) -explosives (2d/3d) -principles (2d/3d)

-maintenance, finish

2) a) -the use - for what

b) -usage analysis

product analysis single components
component relations

target prerequisites (goals)

usability

fomal concept (detail-object-context) technical and engineering aspects economic aspects ecological aspects socio-cultural aspects

final task

etc.

duration approx. 6 weeks

synthesis (putting it all back together) / creation phase / c

solution-finding via various creative techniques (selection)

brainstorming /-writing / mind mapping

bionic, modul variation/component position, morphological box, metaplan, etc.

ideas - sketching - storyboards -user/usage scenarios sketch modells (paper, foam, etc.)

designconcepts /-details - (sketching - 2d cad - 3d cad)

finding alternatives - evaluation/validation (interviews, rating scales, conjoint measurement, semantic differential, goals, etc.) finding variants - evaluation/validation (interviews, rating scales, conjoint measurement, semantic differential, goals, etc.)

colour, finish, material (cfm) roadmap (pantone, sikkens, ncs, ral, etc.)

further mock ups

optimisation

realisation / documentation (description of the result)

refinement / development / visualisation / technical drawing / cad simulation and animation detailed mock up /presentation model documentation/(written)report

etc.

duration approx. 2 weeks

presentation / communication

communication / ppt.pdf.flash / modell - presentation presentation-media (boards/charts/booklet)

etc.

exhibition