Why?
semantic context, project periphery

project management

city of the future

mobile cities (climate change, coastal areas) new nomads

urban planning

societal changes (urbanization)

future scenarios

innovation management

location-based services

social exchange (through interaction)

public—private customization and appropriation of space

„ant trail", dynamic infrastructure

in-house lighting, lighting at home

perception of public light

guiding and showing or information in itself

augmented reality

(perceived) surveillance

security in public

energy economizing (through interaction)

reduction of light pollution

interactive, dynamic

| Infrastructure | "Ant Street" | Space Usage |

interactive, dynamic

What for?

application and purpose

fun and play

social networking (city 2.0)

orientation
static → buildings
or
dynamic → people

security, visibilty

advertizing

(de-)activation of city quarters according to current needs

economizing energy reduction

bottom-up guidance

top-down guidance

other advantages and motivations

prestige

impact reduction (unspoilt cityscape, no digging, posts etc.)

light objects as souvenirs

lower traffic risks (no posts to drive against)
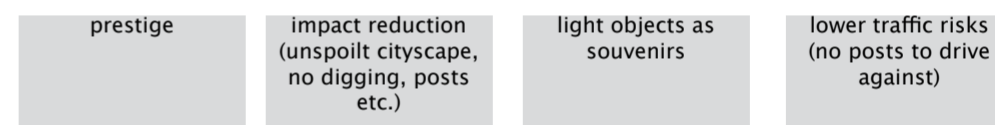
purpose for user ⊢⟶⊣ purpose for client

Where?
(mostly outdoors)
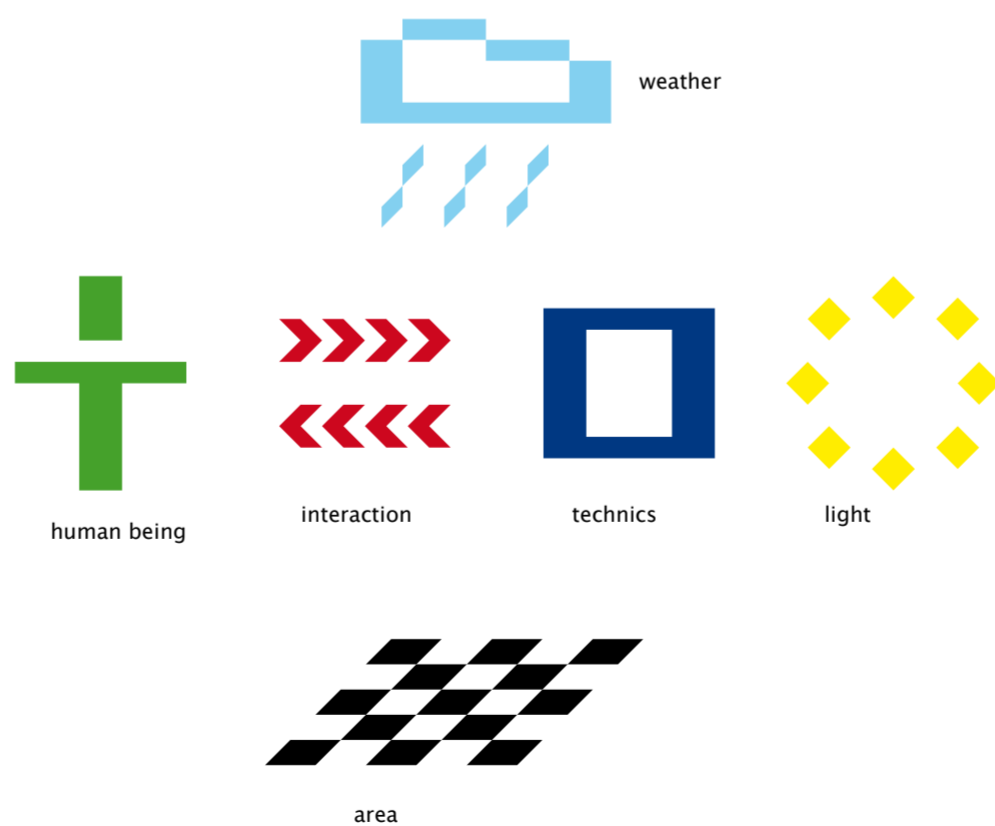
Strijp-S (main area)

current state → target state

urban spaces (sub-areas)

boulevards

squares

crossroads, traffic nodes

building entrance areas

sidewalks pathways

dimensions:
large-scale
small-scale

How?

weather

human being

interaction

technics

light

area

For Whom?

user groups

workers, commuters

shoppers

party people

tourists, visitors

stakeholders

Philips

Roosegaard

ZHdK

SAIC or RISD

Wolfgang

city of Eindhoven

local industry (shop keepers etc.)

What do people do anyways?

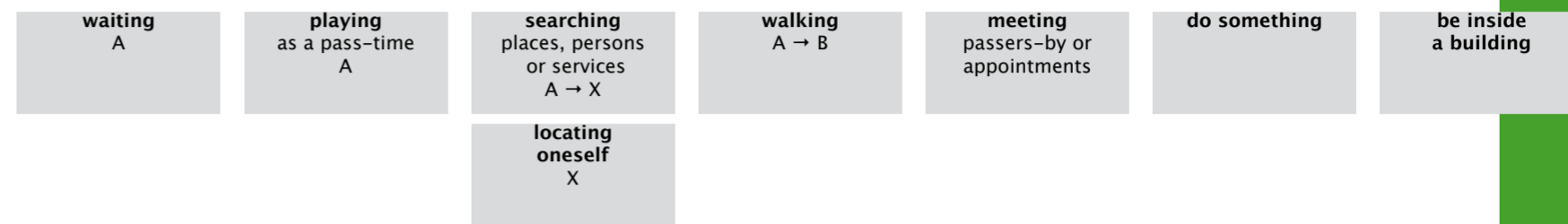**possible situation parameters**
not knowing what to do — knowing what to do
being on the way — being on the spot
being alone — being in company

situations, actions

waiting A	playing as a pass-time A	searching places, persons or services A → X	walking A → B	meeting passers-by or appointments	do something	be inside a building
		locating oneself X				

← transitions of usage →

What are the present, possible outdoor activities in Strijp–S?

	on the way	on the spot
alone	fear of the dark, robbery, violation looking for friends or new acqaintances rather in a hurry going for a walk, thinking watching people jogging, skateboarding taking your dog for a walk ask people for the way	(mostly indoors) doing grocery shopping buy presents for others going to the gym going to a bar, looking for sex–mates doing sports chill on a bench or the lawn
in a group	talk drink be bored call other people waiting for someone to join meeting other groups change goal spontaneously loose each other lag behind go ahead buy cigarettes, food or drink on the way dump garbage orient by and follow a few leaders	talking to each other stick with the group mostly watch an event (match, show etc.) do sports, play games

What might people think of the light?

user perspective and possible reactions

positive

information, augmented reality
personalized assistance
meet appointments
light as landmarks (dynamic or static)
people as landmarks
orientation
find services
visibility, recognizability over greater distances
spontaneous evening planning
visible spontaneous hotspots
party finder

personal power
personal impact on environment
conquering space
democracy

beauty
unspoilt cityscape (no cables or posts)
fascination for the artefact

fun

security
no fear of the dark
no dark alleys

socializing
group recognizabel as such → members don't get lost
different parties of common interest can join (e.g. same destination)
could be fostered through game → spontaneous matches

negative

fears
falling and crashing object
moving shadow uncomfortable
perceived surveillance
lacking anonymity (e.g. while snogging, pissing, smoking pot)

annoyance
noise (of propellers etc.)
color flashes
„It doesn't do what I want it to!"

lacking respect
vandalism
despise („Waste of money and energy!"
theft of objects

interesting

associations
polar light
sun (if light very high up)
stars and sky
firefly
head light
torch

in case of a game
competing with each other
access new features
individualization

How might people behave towards the light?

How might the light behave in return?

(discrete) orders the user might need

start engagement (demand light)	change purpose/ mode of usage (see „application pur–poses", page 2)	pause engagement (make light wait)	end engagement (send away light)

actions/input by the user
(things the machine can react to)

rough input

direction
(right or wrong way, towards or away from centre etc.)

movement
(static or dynamic?)

speed
(standing, walking or running? or taxi–driving)

position
(according to centre, destination, other peolpe etc.)

agglomeration
(meeting others, being alone, two groups joining)

area
(remote or central? relaxing or active?)

detailed input

sound
(screaming, direct orders)

direction of gaze
(which way does user look?)

gesture
(pointing, clapping etc.)

additional interface
(mobile device or terminal)

reactions/output by the light
(things the user can read)

physically

position to user
(above/below, befo–re/behind/besides)

size
(inflate/deflate fold/unfold)

shape and form

dances, choreographies
(movement loops)

height

speed

light (and other emissions)

color

oscillation
flashes (on/off)

sound

brightness, intensity

Scenarios

seperate ideas

scenarios (with minimized threat)

doggy light
subordination of obejcts
follow direct orders like „Sink! Rise! Red!" etc.

light taxi
interaction terminal: order, command and send away light objects

torch relay
fluctuation of objects: objects only cover a certain area

lead light
light doesn't follow behind but flies ahead

moody light
object leaves and returns frequently

scout
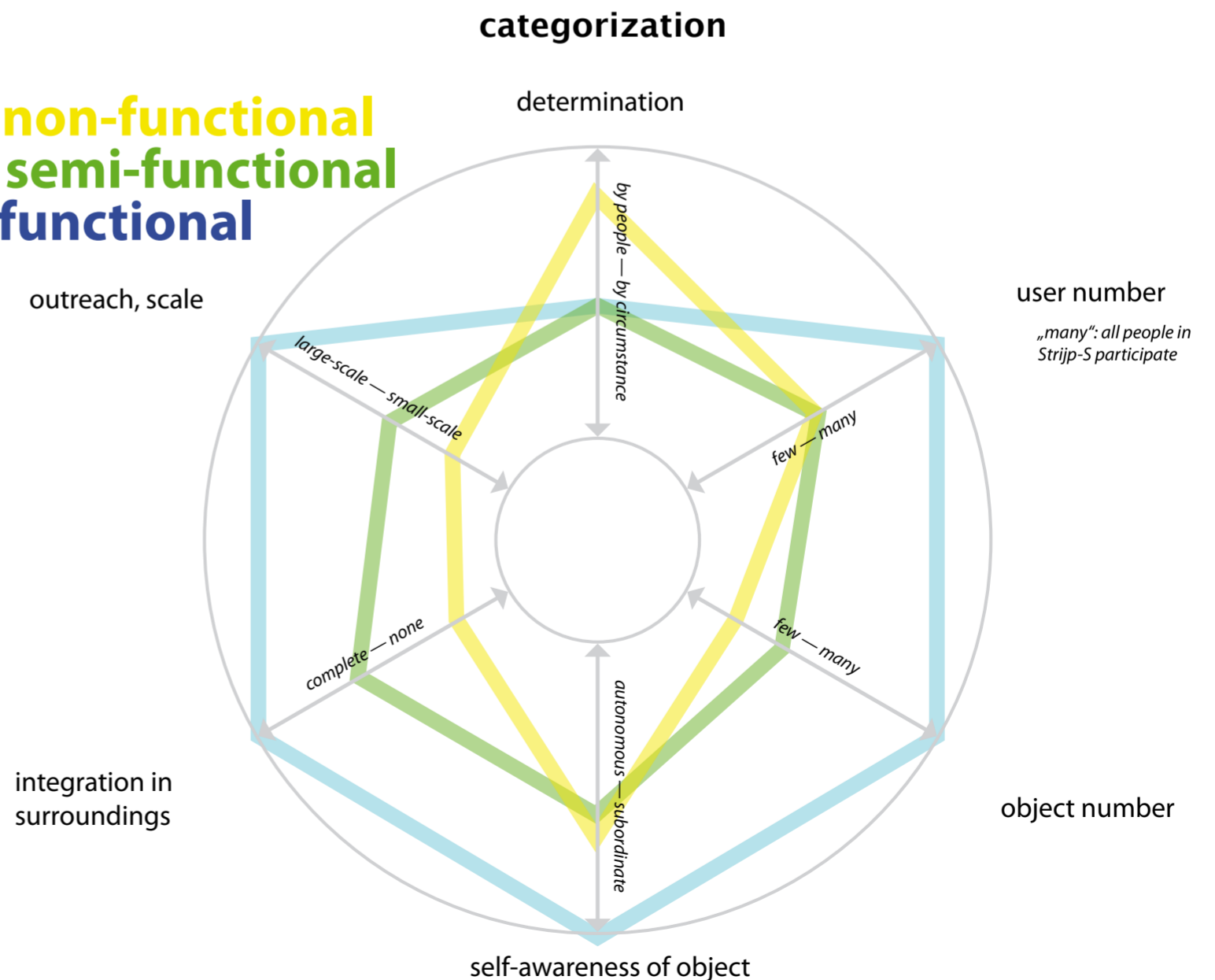light flies ahead to extend your „safe area"

firefly
very small object

individualization
the more you've walked the brighter your light shines
if you passed a game, your light changes (visible prize)
Look at that guy! His light is blue!"
„Freispielen"

categorization

a) non-functional
b) semi-functional
c) functional

determination

user number
„many": all people in Strijp-S participate

outreach, scale

by people — by circumstance
large-scale — small-scale
few — many
complete — none
few — many
autonomous — subordinate

integration in surroundings

object number

self-awareness of object

How does it move?

How does it fly?
balloon
zeppelin
rotors, propellers
hanging → strings
on poles (and wheels)
within magnetic field

How does it move?
static grid (static elements, only light moving)
fluent, kinetic grid (creating different denseties)

How is the light created?

chemical light

physical light

reflection
different mirrors reflect light from a central source
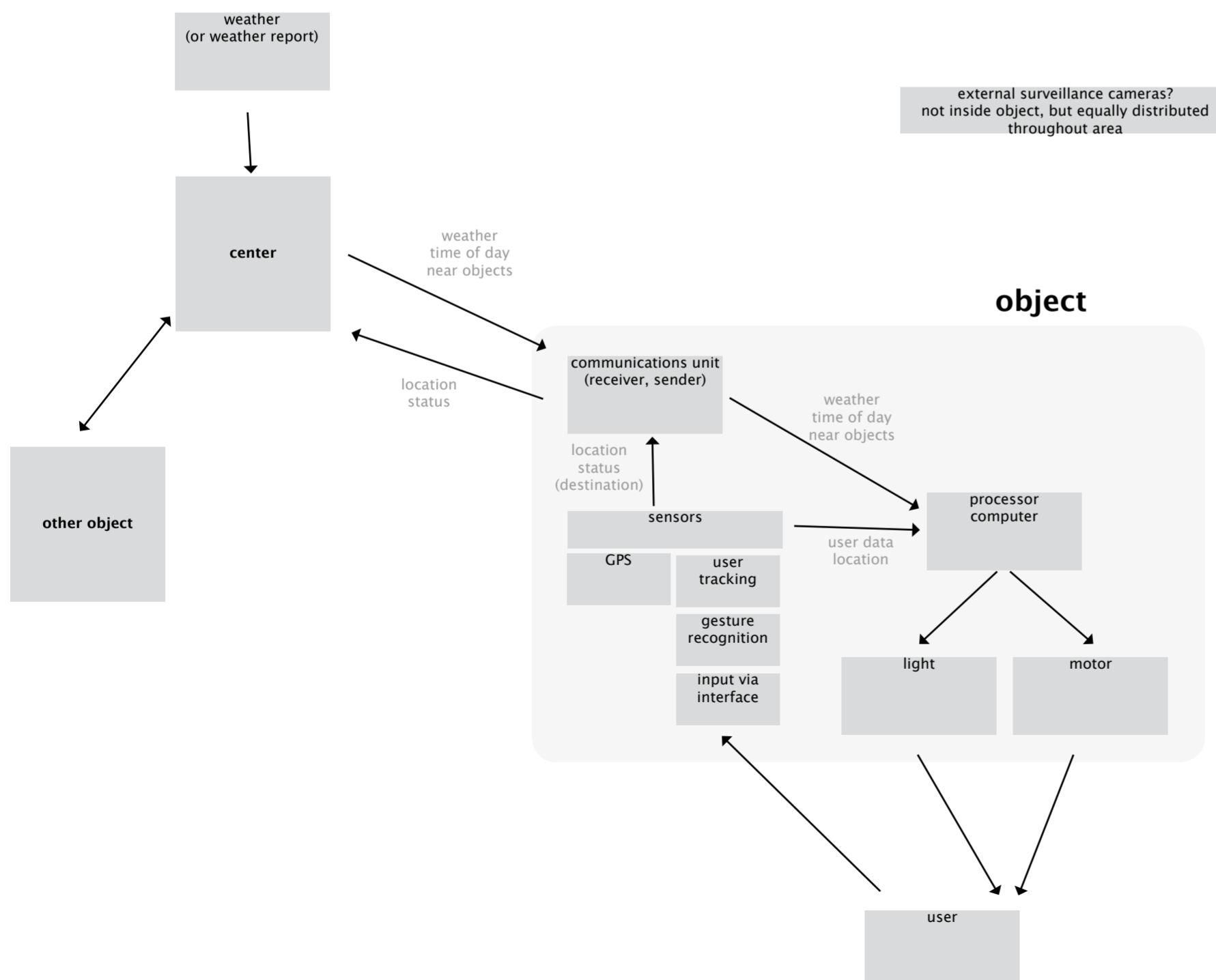or projection of light into mist

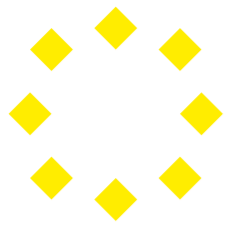**subtractive**
static light shines through flexible holes

How does it recognize the user?

kinect camera

centrally organized software system for scenario c) functional

hardware?

weather
(or weather report)

center

other object

weather
time of day
near objects

location
status

external surveillance cameras?
not inside object, but equally distributed
throughout area

object

communications unit
(receiver, sender)

location
status
(destination)

weather
time of day
near objects

sensors

GPS

user
tracking

gesture
recognition

input via
interface

processor
computer

user data
location

light

motor

user

light

definition

- electromagentic spectrum
- frequency (wave lenght)
- amplitude

brainstorming

types of light

- tangible or abstract (with or without a body?)
- What types of light are there?
- Schwarzlicht
- chemical or electric light?
- history of artificial light
- ultra-violett
- infra-red
- street lanterns: history
- technical production of light

related physical phenomena

- optics (Newton)
- particle or wave? quantum physics
- mirrors
- prisms
- lenses
- shadows
- warmth

light in-doors

- light at home
- light in offices

urban light

- What is light currently used for in cities?
- traffic lights
- light in present city planning
- Tokyo: what light is there in times of energy shortage?

light and communications

- morse code in light; light as means of communication

without light

- blind people and how they orient

light and perception

- atmosphere
- theatre: stage lighting, creating moods through light
- light artists
- How is light perceived?
- How do people like current light in offices or public places?
- color studies (feeling through color)

light-related problems

- light pollution
- What it be like to see the stars from city centers? Do urbaners miss the stars?

light in nature

- Mücken fliegen zum Licht
- natural light What is it used for ("lantern fish", polar light)
- living in the dark (chemosynthesis)
- night vision (animals, military)
- the moon and stars
- fire
- nachtaktive Tiere
- links between human activity and light
- polar night: human need for light
- light-eating yogis

services

fly ahead and thus show you the way
fly into side streets to show you what's there -> ne fear of the dark, security
wait for you when you pause
make a little show when you want it to
rise high in order to make you visible for friends from afar
shine brighter if it's especially dark or when you're alone
accelerate and make you walk faster when you're late
come to you when you need it (entrance and anywhere else)
change appearance if you want it to, without any change of function
play tag (Fangen Spielen)
fly higher to illuminate your surroundings
fly lower to give you a highlight on something to read
direct your attention to signs, shop windows or other things
attract you to other people: make detours to make two people meet
leave you alone when you want to be
distract from you when you don't want to be seen
wait for you while you enter a building
allows you to take in into your hands in order to warm them
roll on the ground
allow a tracking function: show your friends where you are on a distant screen
create statistics and a movement profile: "How long did you need from A to B?"
be passed on to strangers if they need orientation more urgently
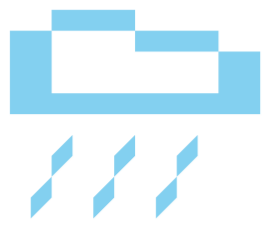
weather

wind
rain, snow
fog
sun
air-pressure
clouds
light/darkness
temperature

object are called back when
weather becomes bad

(Und damit basta!)

robust materials

water-proof

objects cluster,
attach themselves to
the others

garage,
objects fly home

heaviness (against wind)
—
lightness (for flight)

water-repellent
camera lenses

objects deflate

objects look for
shelter
(beneath trees etc.)

objects
gather beneath
trees, connect with
each other

weather

scattering
destruction