# From Vision to reality

## development of a battery and public battery rechargers

## LEV conference, Taipei 2008


Johanna Tiffe, industrial design, Berlin

## Johanna Tiffe  industrial design

- Product and Conceptional Design
- Modeling
- Model Making
- Product development
- CD and Grafics

- Contact:
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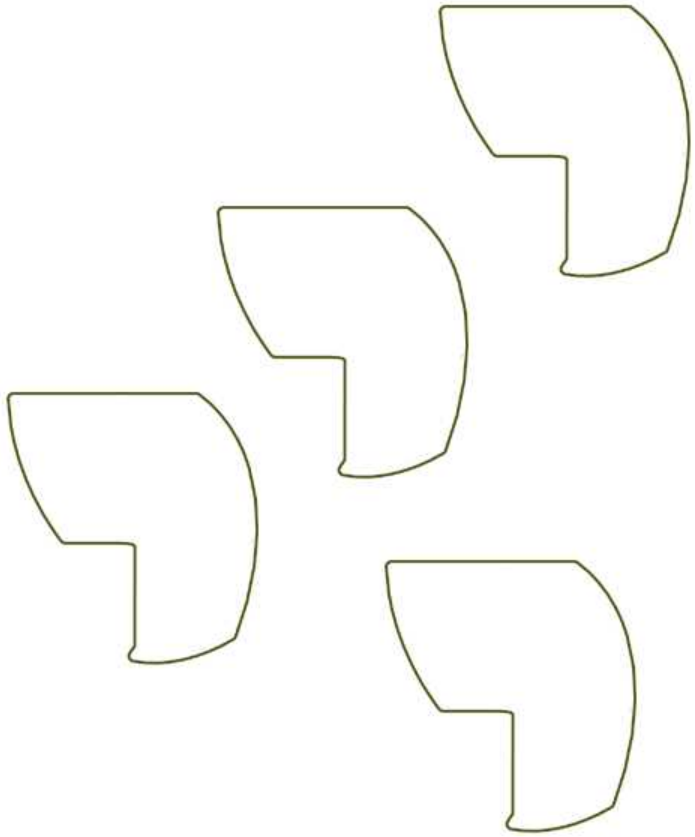
rental systems for LEVs

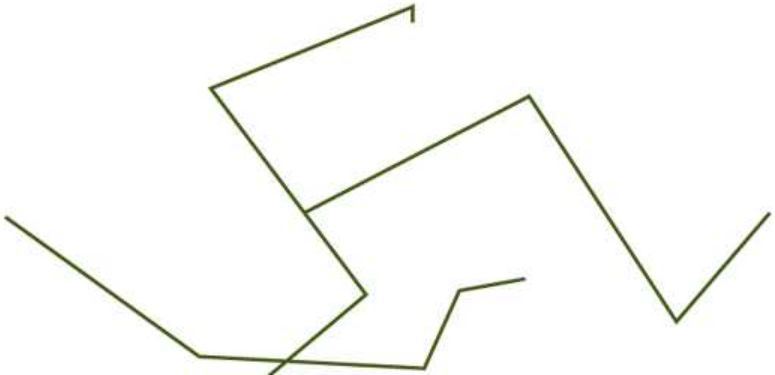
project

battery concept

recharger family concept

infrastucture concept






trials on rental systems

prototypes

working with one battery typ

one for the pedelec "Racoon"

one with solar panels

high dependence on one bike

never introduced in the market

1. system:
implemented in an appartment in Tokyo

for residents only

identification throughout card

one pedelec type, simple

2. system:
implemented at railway stations

same style


dogging stations in four places in town

identification throughout card

targetgroup: tourists and citizens

number of available bikes anounnced via internet

bikes: economical bikes from China

2.project: e-scooter rental

start as a vision

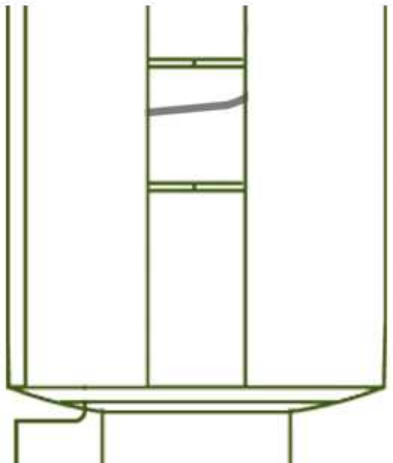
collaboration of various parties:

Gepida for the battery

ExtraEnergy and ITRI for the recharger

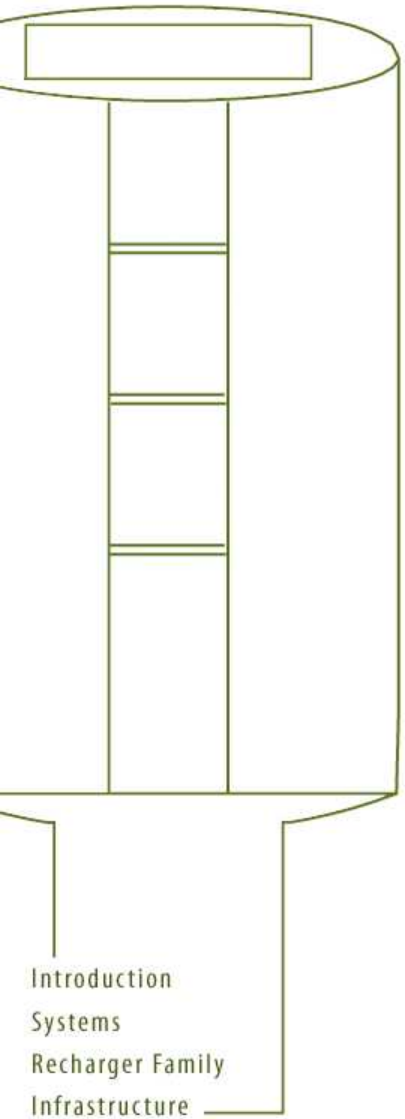
Stuttgart for the implementation of the system

result: a very flexible battery and a recharger family





Touc further information

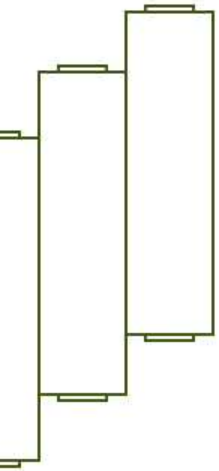


GERDA from Hungary developes a flexible battery

worldwide the first bike producer taking the challenge

GERDA is highly interested in EnergyBus

open for partners for further development



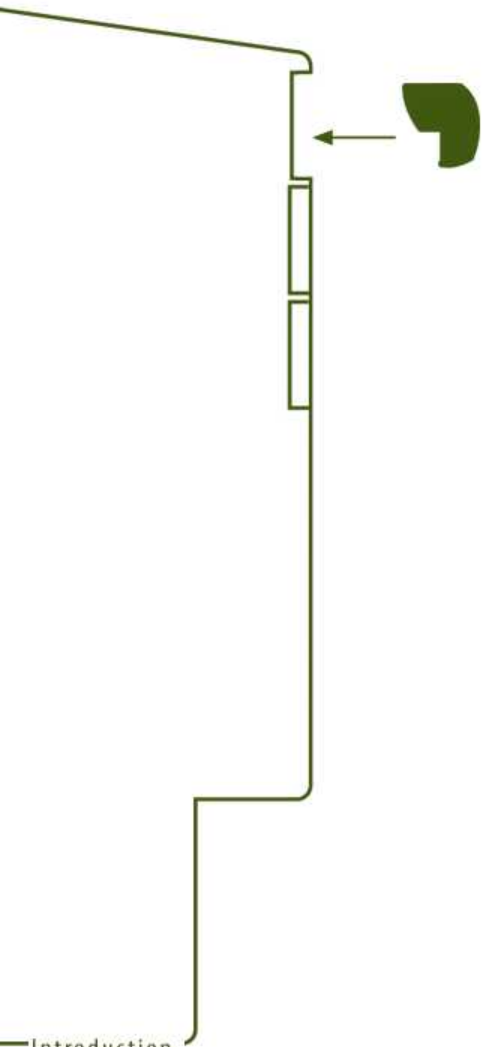
battery runs on 3Ah / 36V

integration of various cell types

special PCB-development for this battery

comfortable handling concept

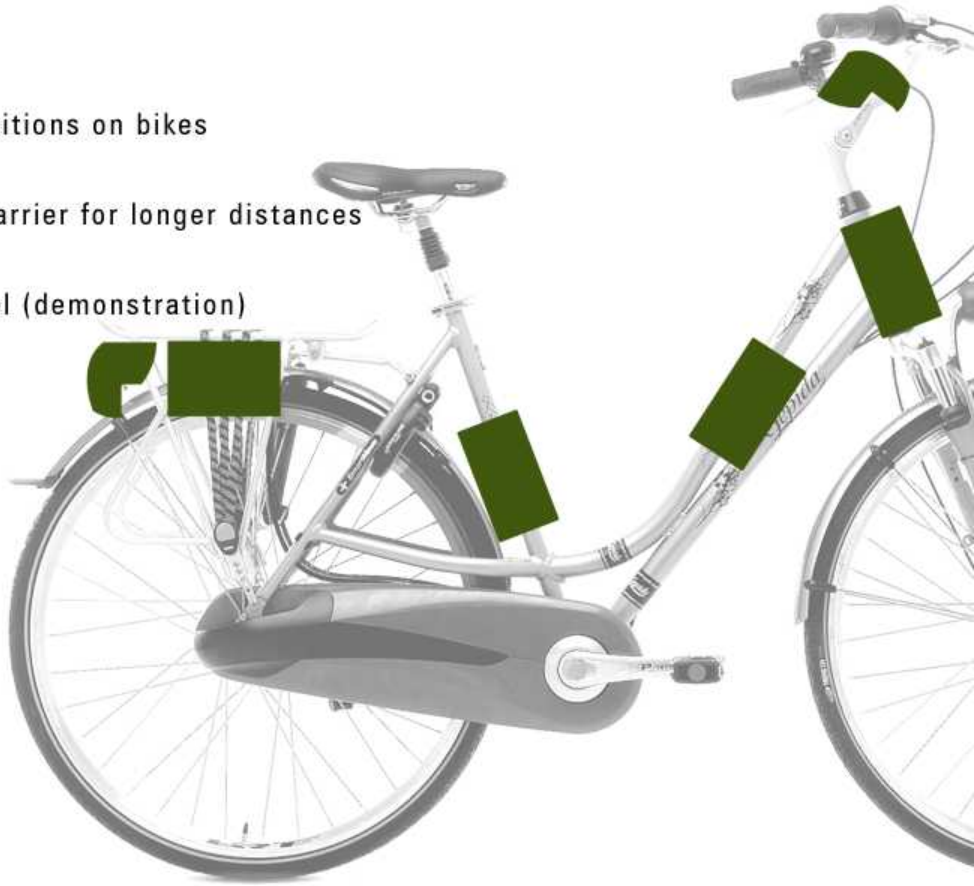
patented



battery to mount in various positions on bikes

two batteries in parallel on a carrier for longer distances

battery simple to insert in panel (demonstration)



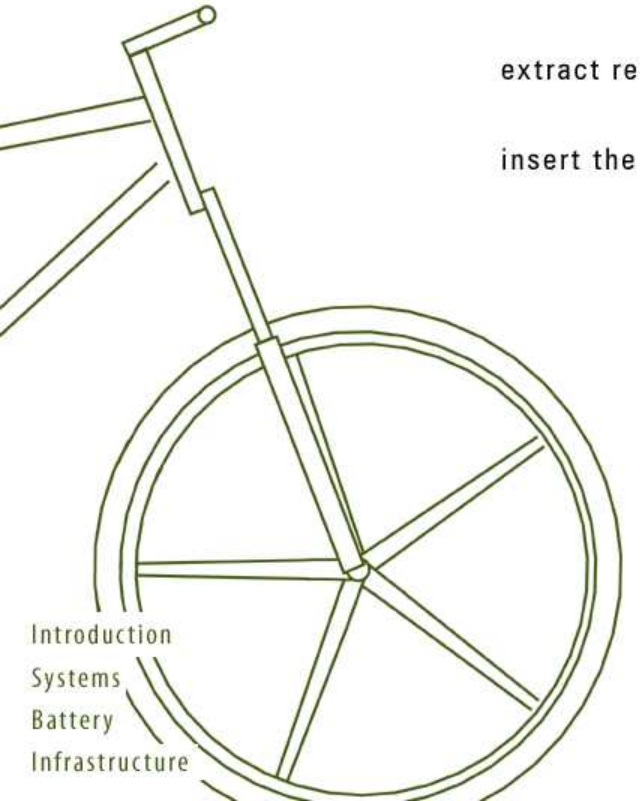
via sensor the panel activates itself if battery passes by

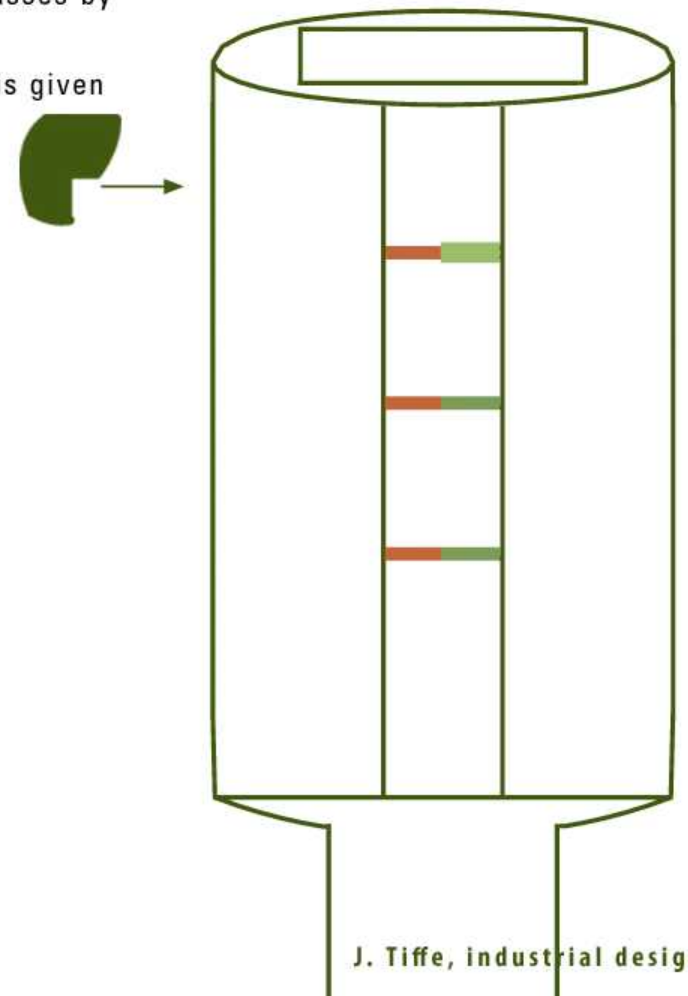
press green button in lines in which green light is given

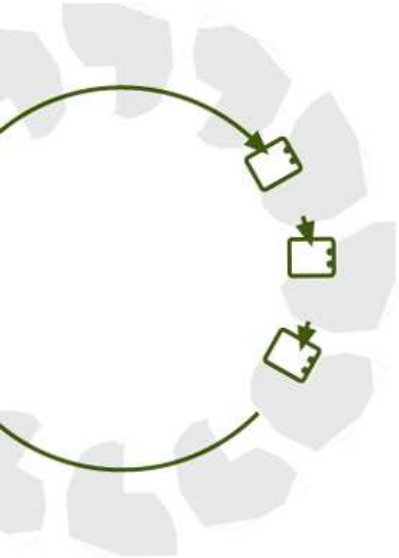
insert dead battery

extract recharged battery

insert the recharged battery in bike







ring of compartments with plugs

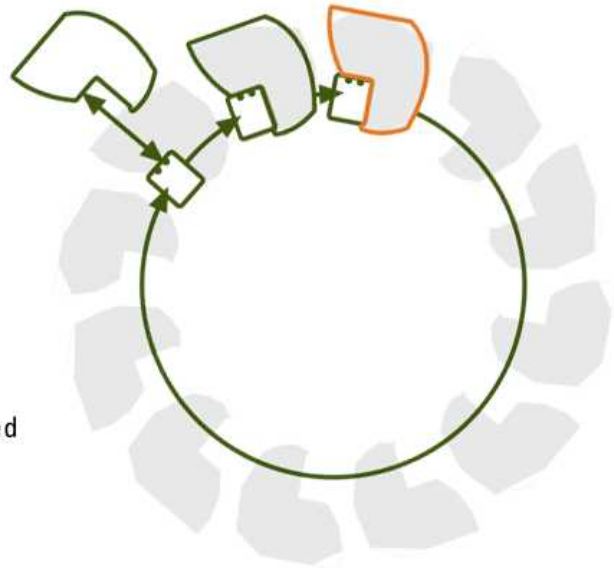
every plug with EnergyBus

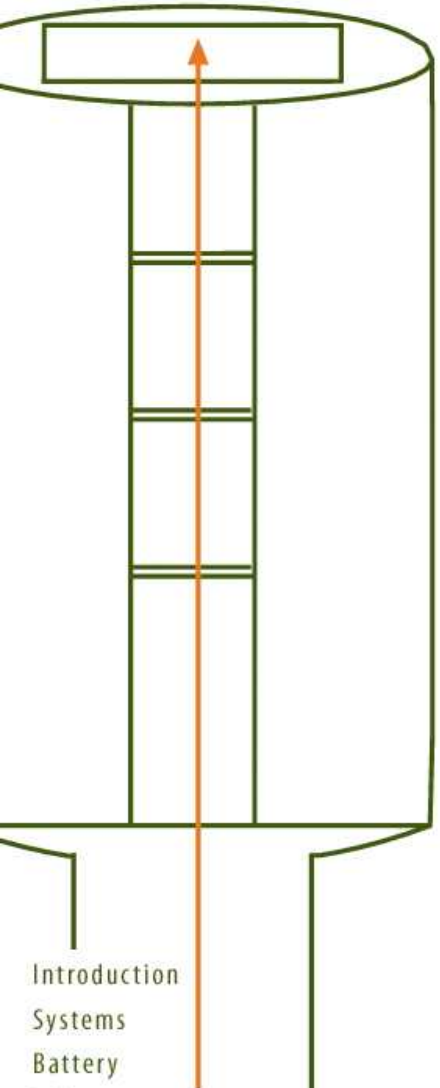
each ring is an independant turntable

broken batteries remain in line with healthy ones

in case of too many broken batteries, service informed

advantage: mechanically simple





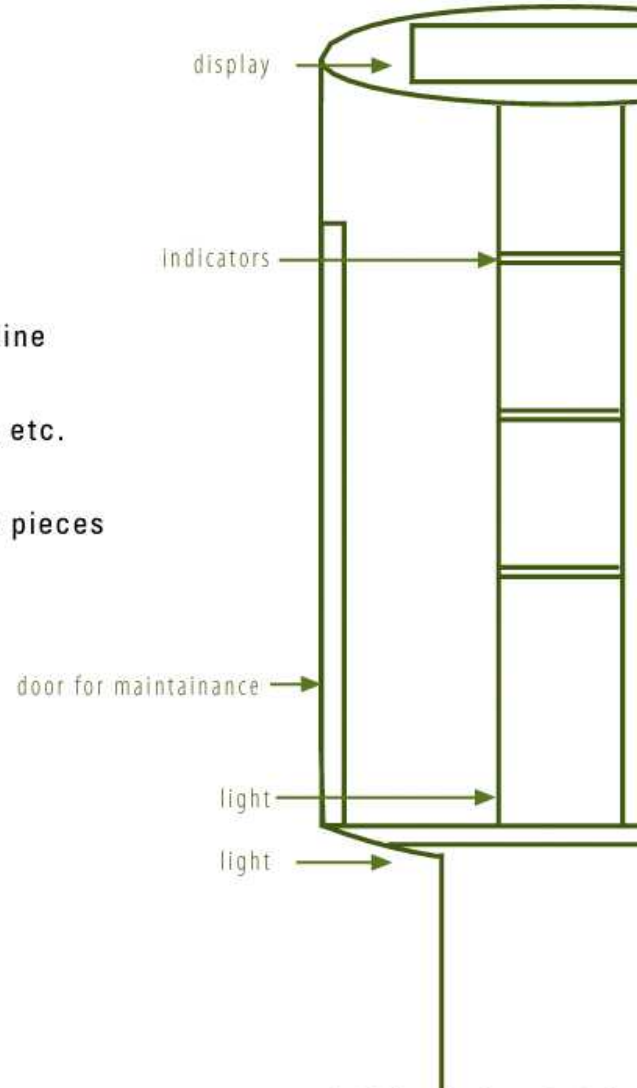

decent styling

integration in enviroment

easy handling: all application-parts in one vertical line

every provider company can adapt their own colors etc.

to simplify production: equal parts used for various pieces



sixteen rings

11 batteries per ring

open in front

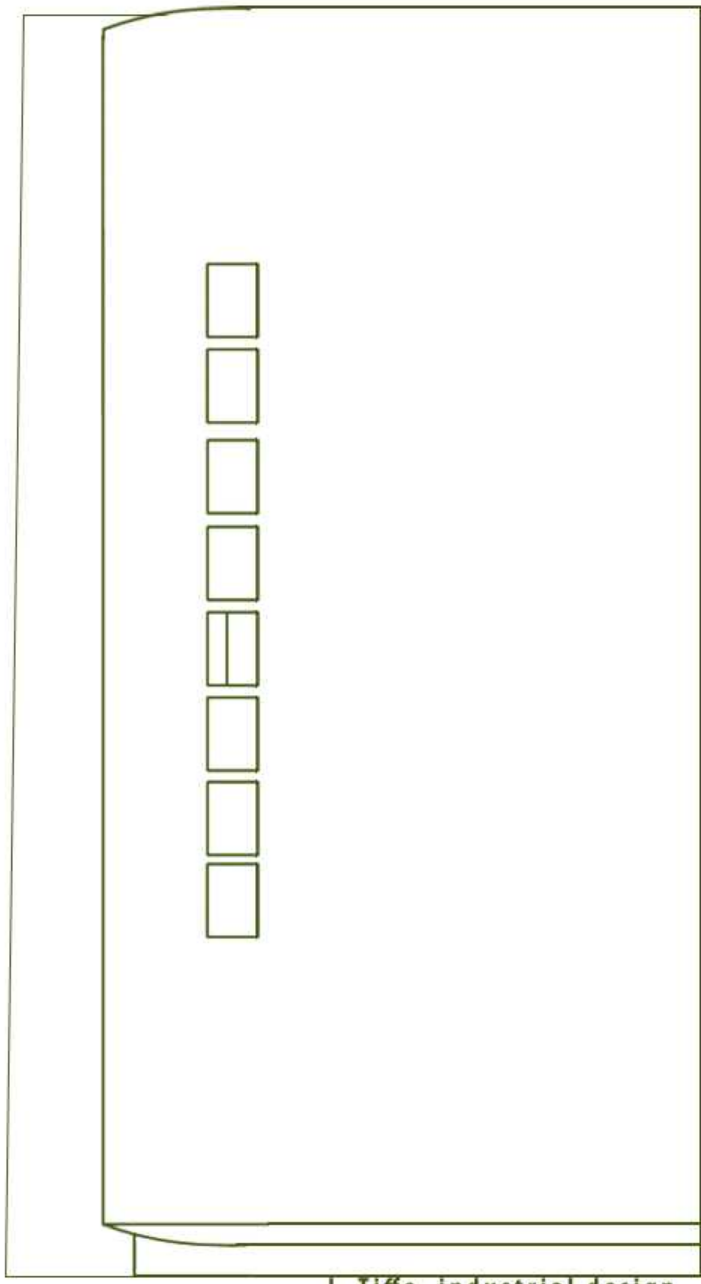
for important places in town

storage of sixteen scooter batteries

optional four plugs to recharge scooters directly

optional solar panel

info point



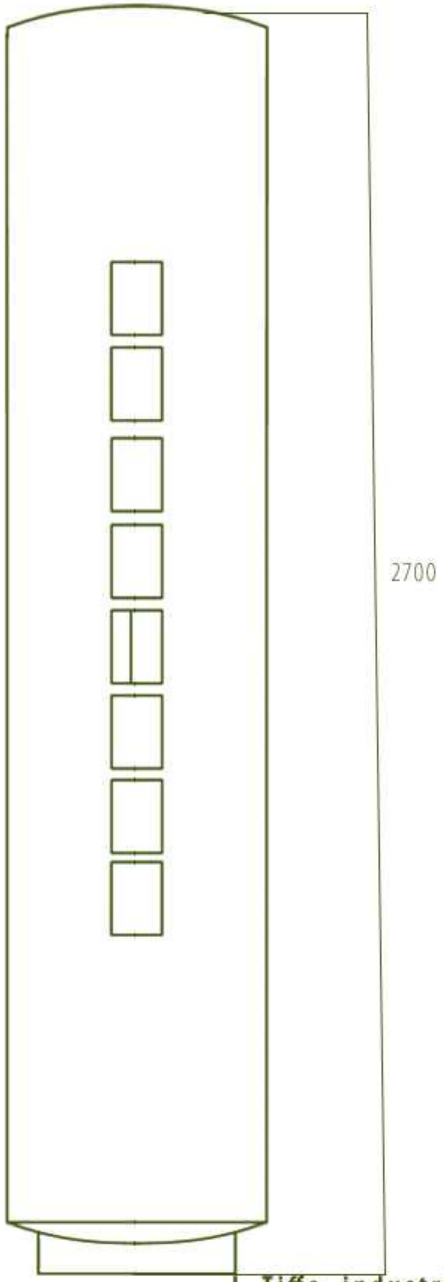
eight rings

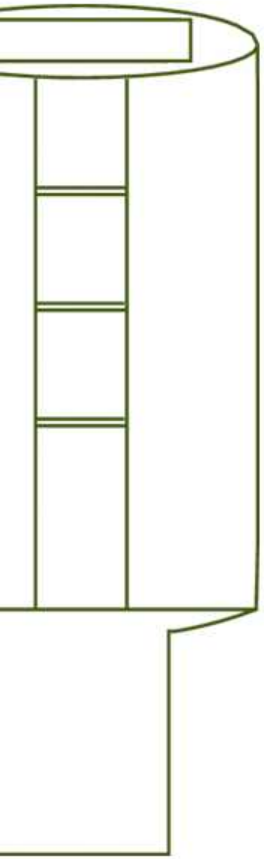
11 batteries per ring

to open from back and front

for significant places in town

as advertisement column



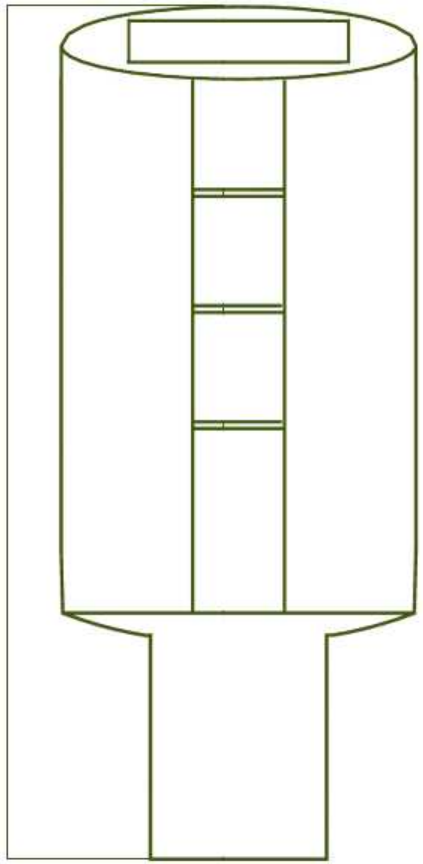


three rings

9 batteries per ring

to open in front

for various situations

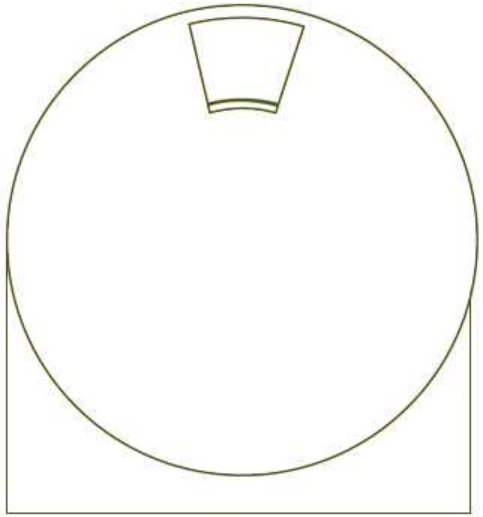


one ring

8 batteries in ring

to open in front

for shops



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Thank you for all the support I had for this project!

Thank you for your attention!

Do you have any questions?