



Aalto University
Design Factory

Methods in Early Product Development

lecture 2

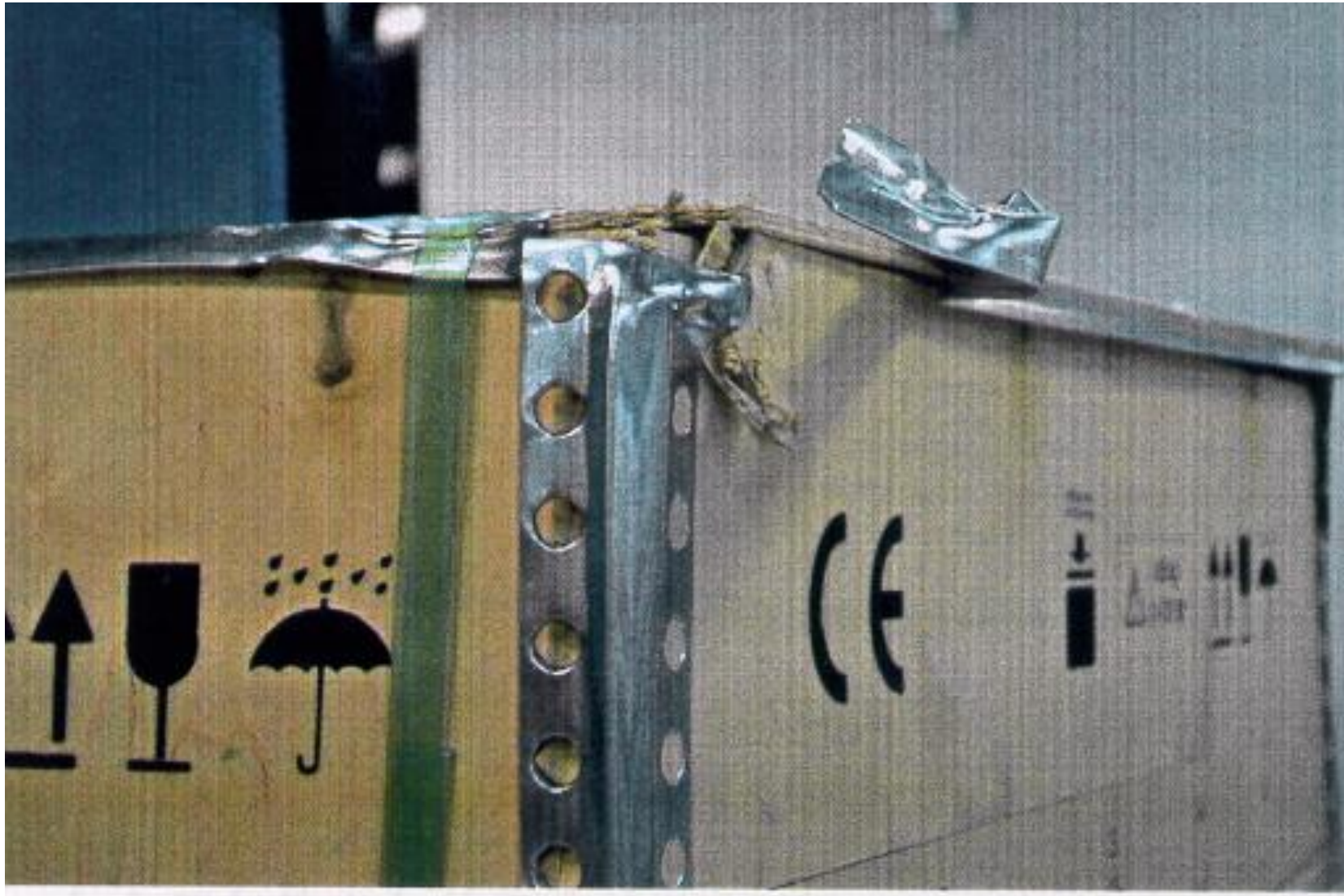


where do ideas come from

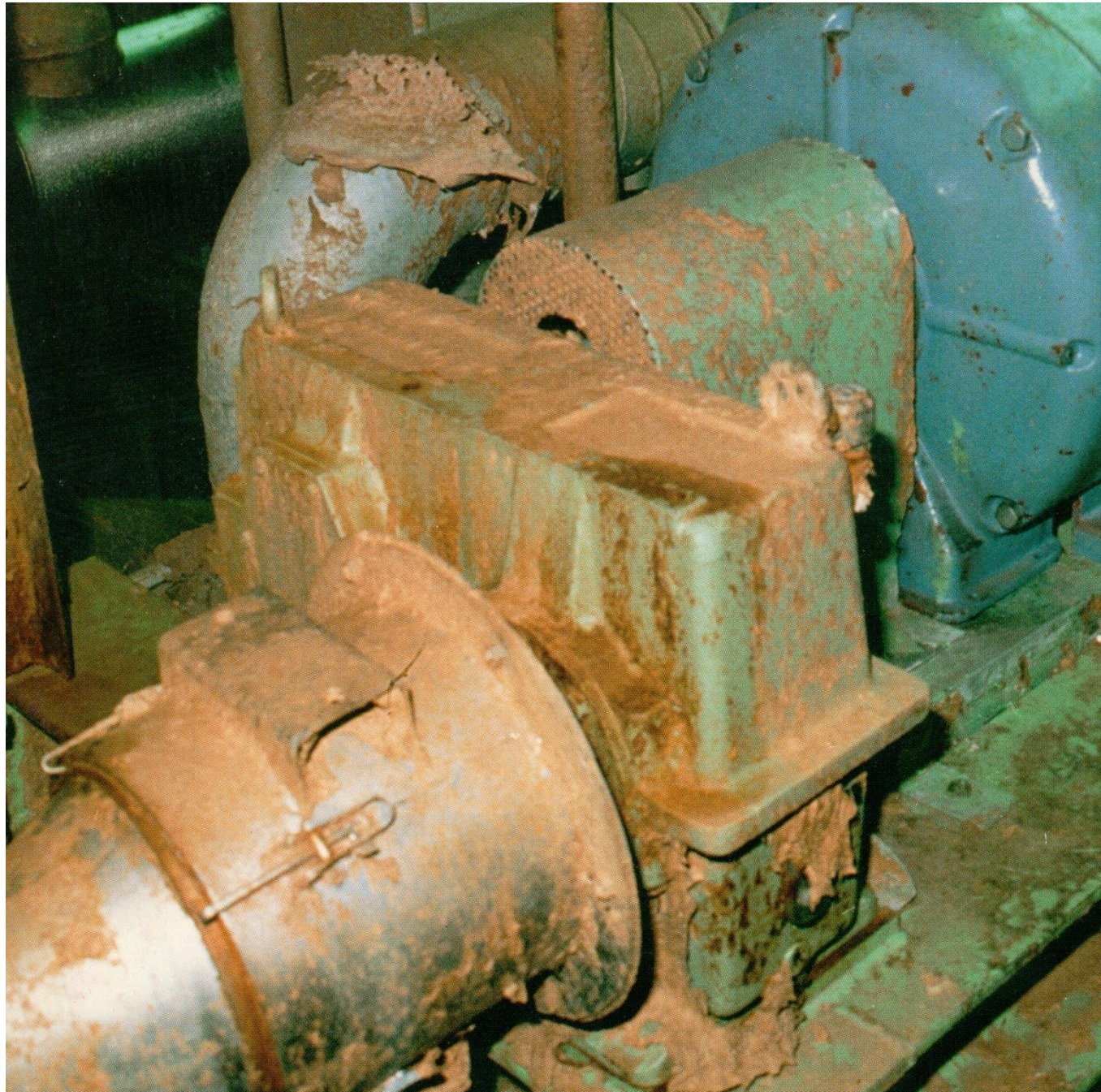


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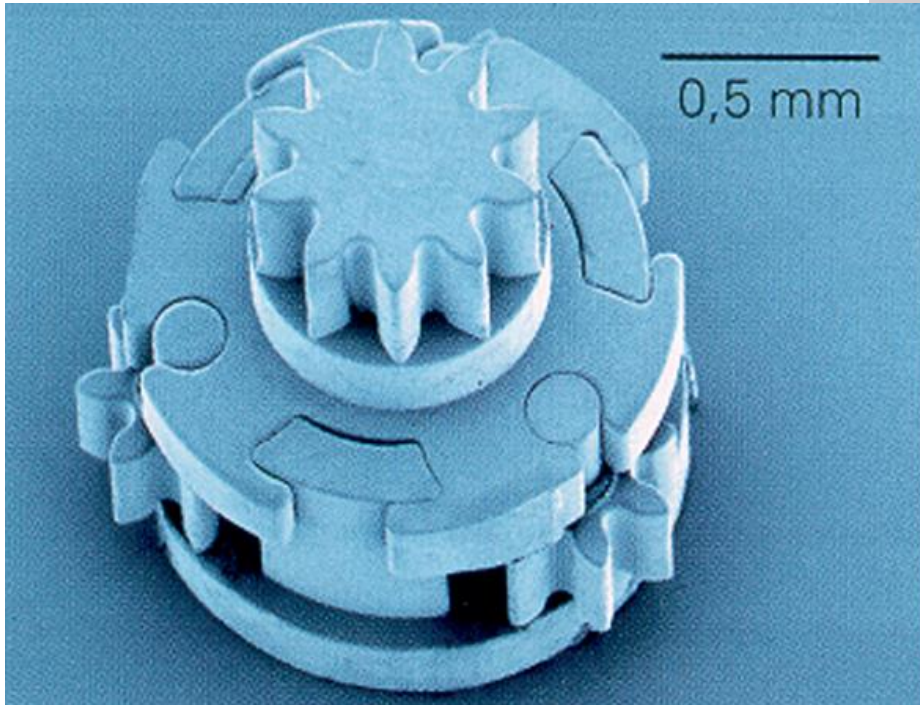
where do ideas come from



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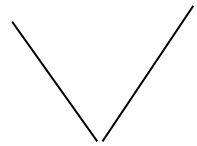
becoming old?

- 32,3% of japanese citizens over 65 year 2050
- in China, India from 4%->10% during last 20 years
- in EC, >35% consumer spending by >50
- in EC, >65% savings
- living at home longer is emerging trend

process examples

(IDEO)

understand - observe - interpret - visualize - realize - communicate - implement



Ask
Watch
Learn
Try



RESEARCH ; summary

in succesful projects:

customer needs have been understood better

more attention was paid on marketing issues

development was more effective (not allways faster)

more external help was used

responsible persons had more power and authority

RESEARCH ; summary

failure statistics:

poor market analysis	45%
faulty /poor products	29%
inefective marketing & sales	25%
high production cost	19%
competiton	17%
false timing on market launch	14%
problems in technology / production	12%
miscellaneous	24%

CASE "ITERA" success story

- 1973 Volvo mini car research
- plastics opportunities
- >200 product ideas, to be made of polymers
- energy crisis I and II
- 1980 new enterprise founded
- marketing of "everlasting bike"
- introduction 1981, enormous attention in media
- production ramp-up 1982
- 1982 production volume 14 000

Project

- professionals
- top specialists
- international experts
- competitive market price
- FEA optimized structure

- 1982 sales <7000 pcs
- bankruptcy 1982/1983, trade debts ~20 milj.

ITERA
vm. 1982



Kaikki uudet Minit joutuvat takaisin tehtaalle

AP
München

Suurella kohulla lanseerattu uusi Mini on osoittautunut niin vaaralliseksi, että kaikki noin 7 000 valmistautua joudutaan palauttamaan takaisin tehtaalle korjattavaksi. Asiakkaille Minejä on toimitettu vasta viitisensataa.

Ongelman aiheuttaja on polttoainesäiliön täyttöaukko, jonka maadoitukseen käytettävä erikoismaali kuluu liian nopeasti. Kun maali on kulunut, saattaa tankkauspistooli aiheuttaa kipinän, joka voi



AP

Nolo korjausoperaatio maksaa BMW:lle vajaat kolme miljoonaa markkaa.

räjäyttää koko polttoainesäiliön tuhoisin seurauksin.

Suunnitteluvirhe on aiheuttanut jo kaksi tulipa-

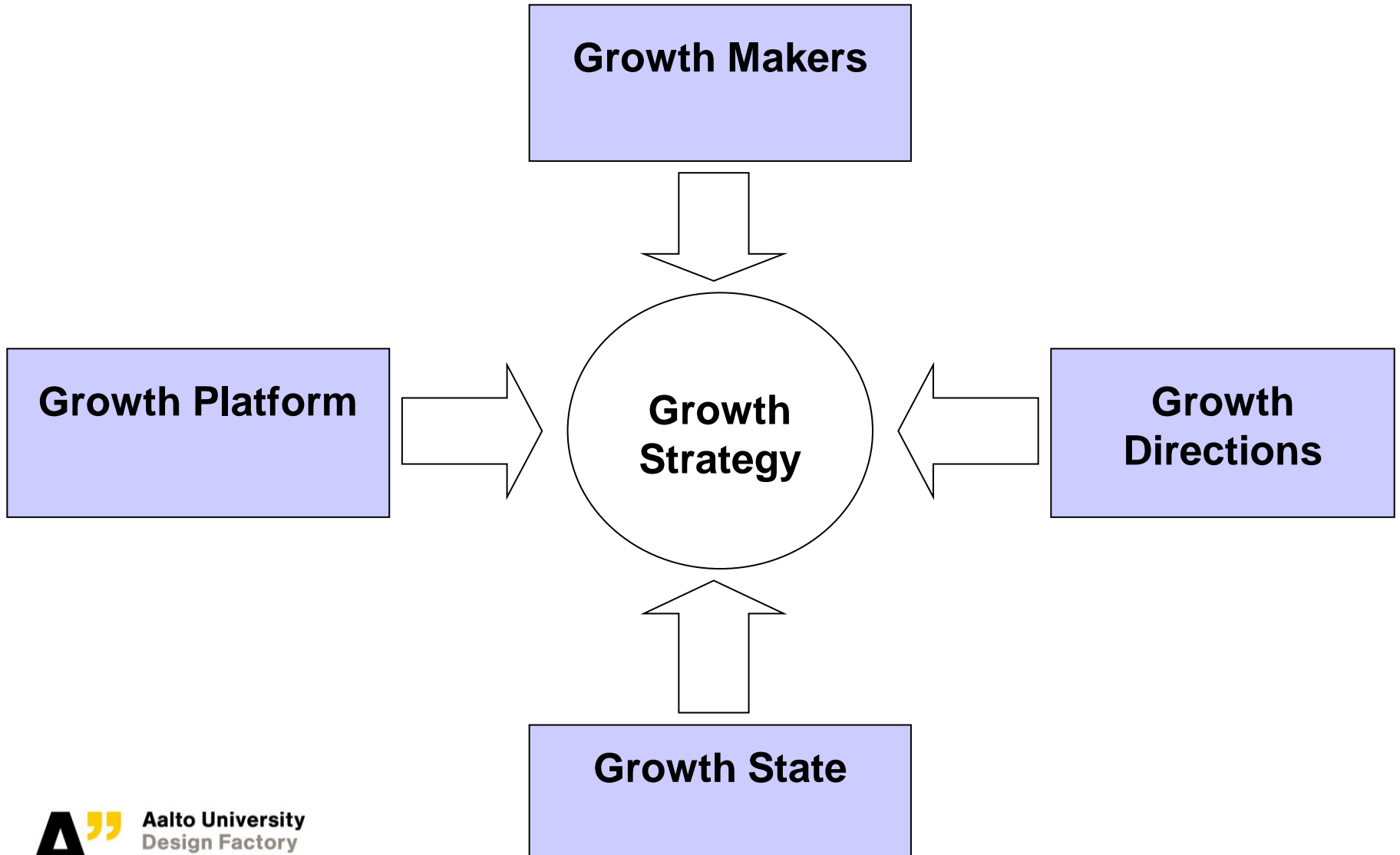
loa, kertoi Minin tuotemerkin omistava saksalainen autonvalmistaja BMW eilen.

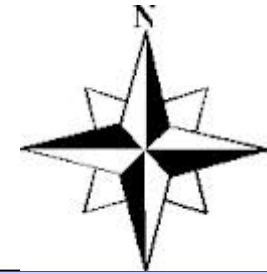
- Tulipalot olivat hyvin rajoitettuja eikä kukaan loukkaantunut, sanoi BMW:n edustaja Rudolf Probst.

Minit korjataan autot valmistaneessa tehtaassa Oxfordissa, Britanniassa. Polttoainesäiliöihin asennetaan erityinen maadoituskaapeli, jonka on määrä estää kipinöinti.

Mini tuli myyntiin Britanniassa heinäkuussa, ja se sai heti suuren suosion. Markkinoinnin Euroopassa on määrä alkaa suunnitelmien mukaan ensi lauantaina, ja Yhdysvalloissa Mini tulee myyntiin ensi vuonna.

Search for Growth





Growth platform

- Economic state
- Abilities
- Management competence
- Operational environment

Growth makers

- In-house**
 - Competences
- In-network**
 - Competences
 - Partnerships
 - Internationalisation potential

Growth directions

- In-house**
 - product/customer-matrix
 - new deliveries
 - new branches
- In-network**
 - re-structuring
 - Internationalisation
 - new regions



Growth State

- Product portfolio
- Future ways of growth

Break throughs

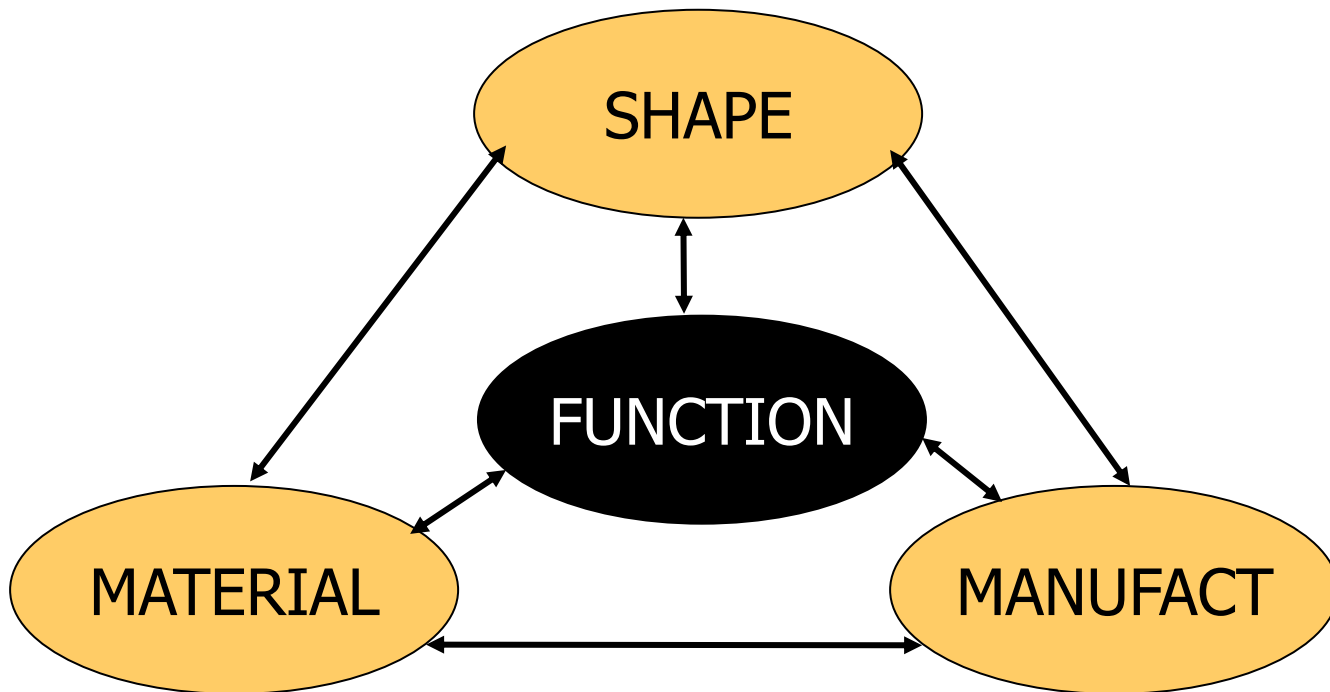
- PC
- cell phone
- d-cameras
- flat screen
- dvd
- air bag
- abs
- glass facades
- energy drinks
- sms
- mountain bike
- inline skates
- nordic walking
- internet
- eco disc
- VF drives
- common rail
- solar panel
- el. water tap
- micro wave oven
- DLMS

Puhdas palveluyritys

Neljä pesukonetta jytää kyydissään 120 kiloa työvaatteita. Sinisiä haalareita tai valkoisia laboratoriotakkeja. Lindström pesee yritysten imagoa jo 21 maassa.











EcoDisc®

Geared



- PMS motor
- No gear
- No machine room
- 3.7kW motor
- 3000kWh/a
- 16A fuse



- Induction motor
- Wormgear
- 5.5kW motor
- 6000kWh/a
- 35A fuse

1 m/s 630 kg

%kWh

120

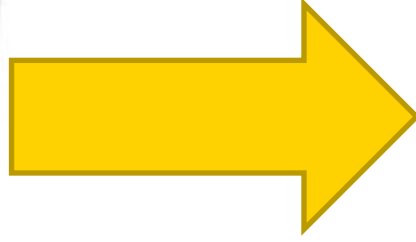
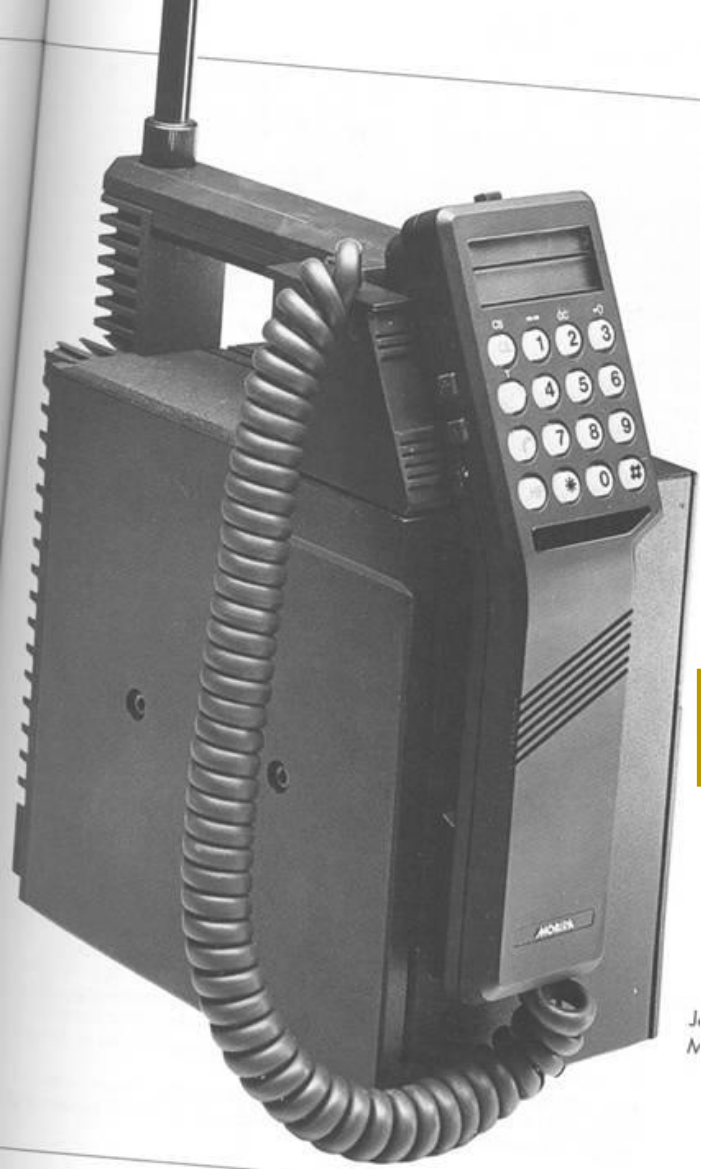
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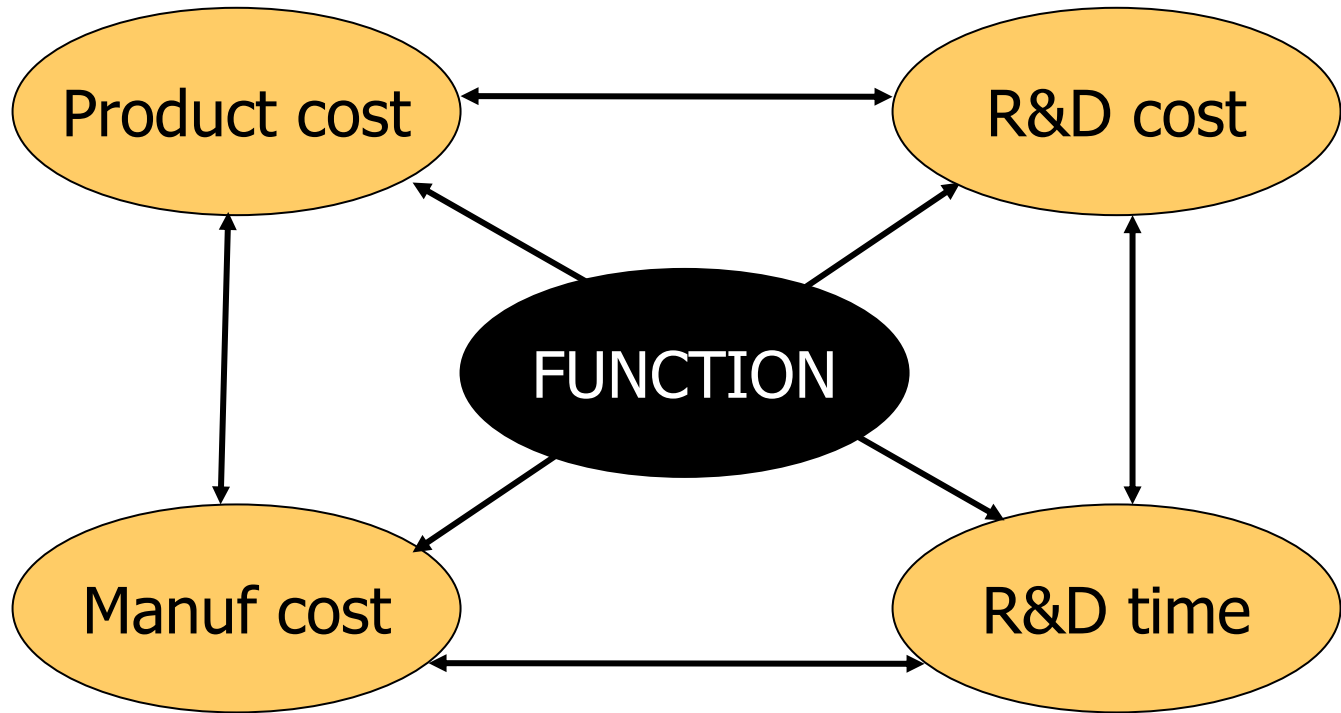
- el loss
- mech loss
- Illumin













CAREER AS A PRODUCT DEVELOPER

Hard elements

- Core competence on something

Soft elements

- Teamworking
- Communication
- Language & cultural
- Project working
- Managerial & leadership
- Curiosity & hunger for learning
- Passion and love

$$\text{Success} = [\text{C}] \times [\text{E}]^2$$

[competence]
[enthusiasm]

Quality is everything

Developing products

- performance
- features
- reliability
- conformance
- durability
- serviceability
- aesthetics
- perceived quality

Developing yourself as product developer

- Performance
- Special skills (on-duty, off-duty)
- Sense of practical issues
- Reliable team player
- Unexpected situations
- Hunger for learning
- Ethics and respect on others
- Reputation, networks, friends



INTERVIEW WITH PRODUCT DEVELOPER

https://www.youtube.com/watch?v=bzkv_cqYZF4

https://www.ted.com/talks/rory_sutherland_life_lessons_from_a_n_ad_man