Design methods?

Kristina Höök

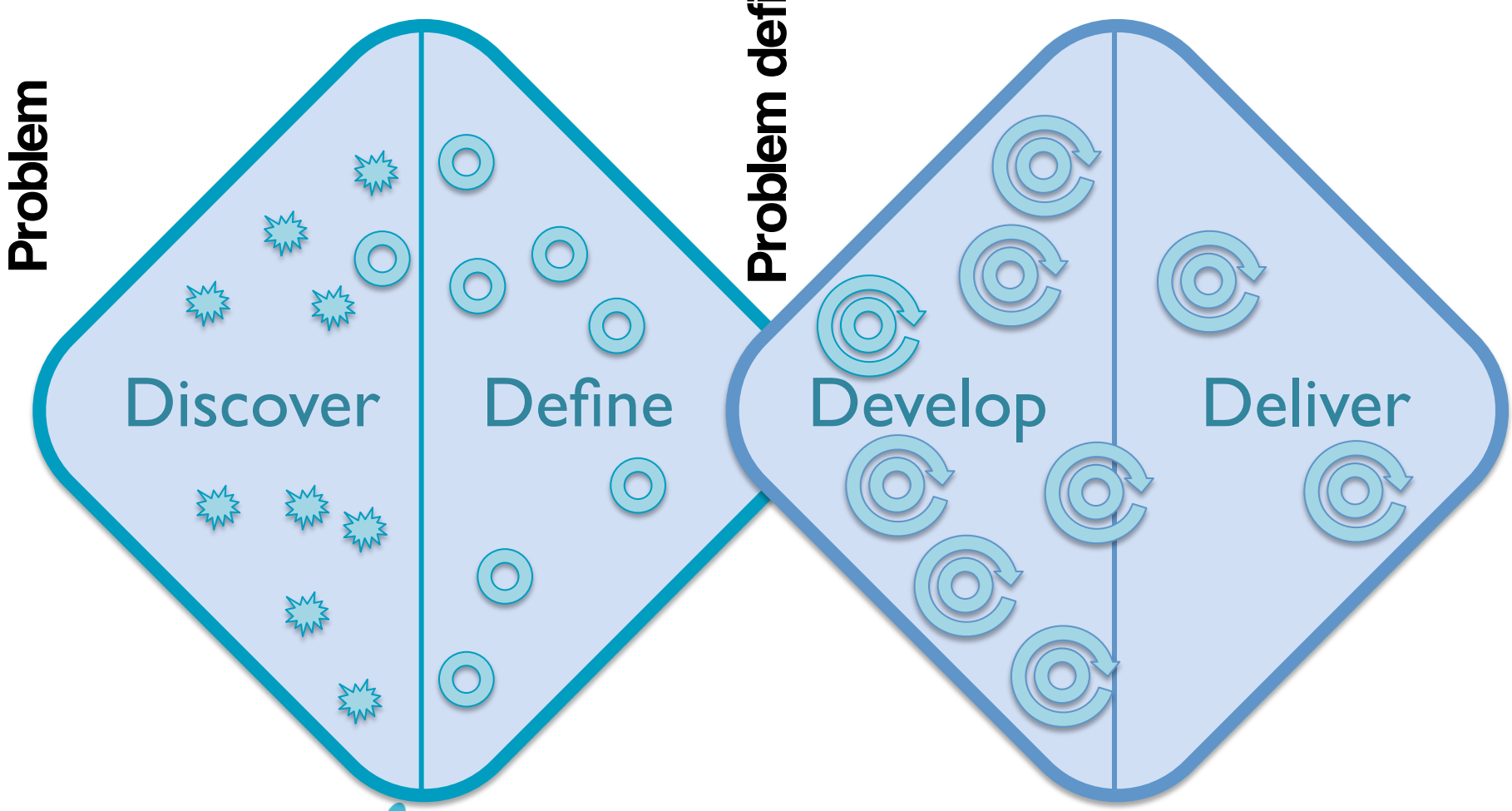
KTH

My aim today

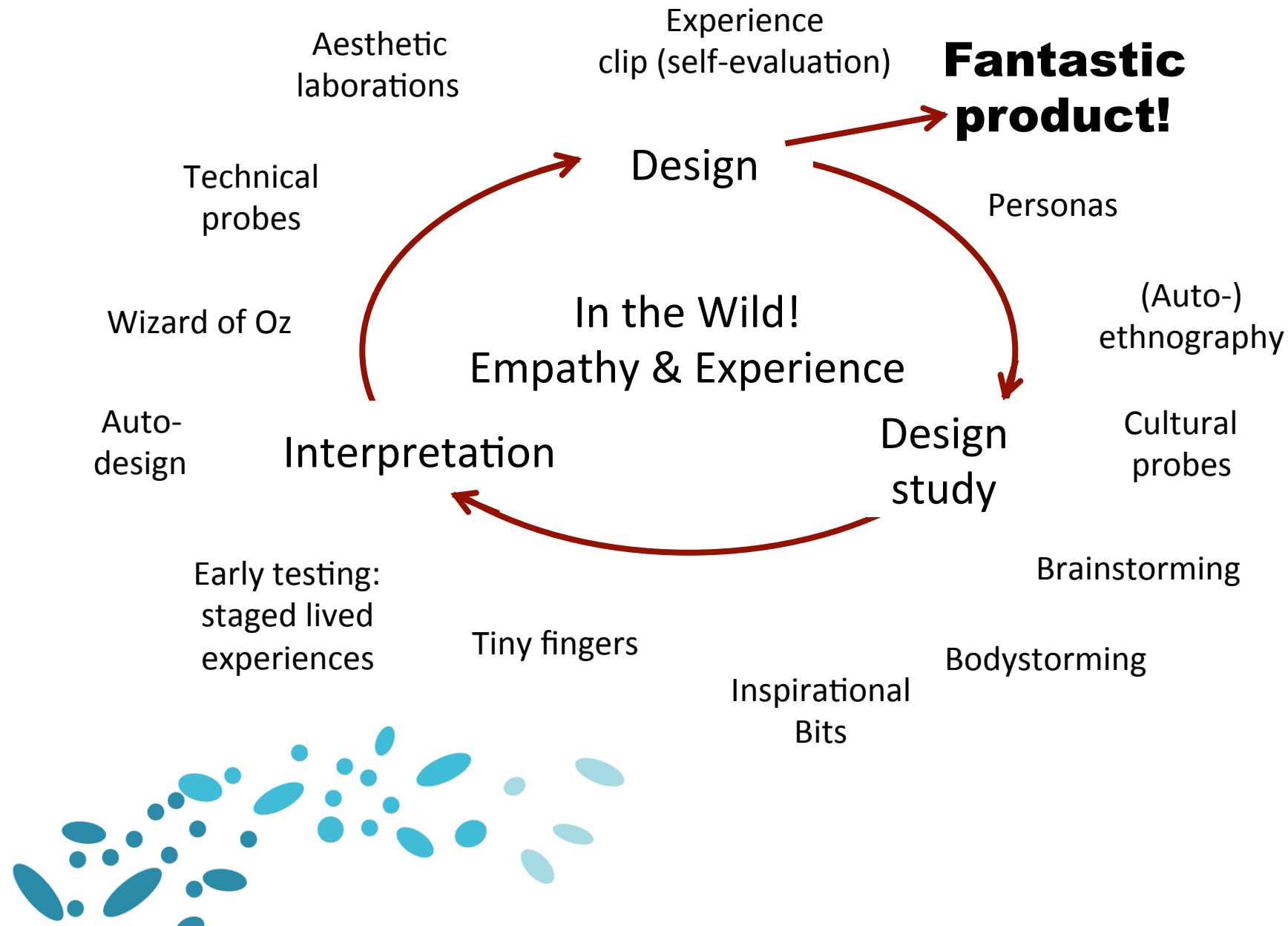
- Bring in users ALL THE TIME! Not expensive!
- Bring in technology ALL THE TIME! Not expensive!
- Do not be scared to try stuff on yourself – but do not assume that you are like everyone else
- Focus on experience
- Generate MORE THAN ONE IDEA!

Structure of my lecture

- Overall user-centred design – the process
- Some study, brainstorming, design and building methods I've found useful

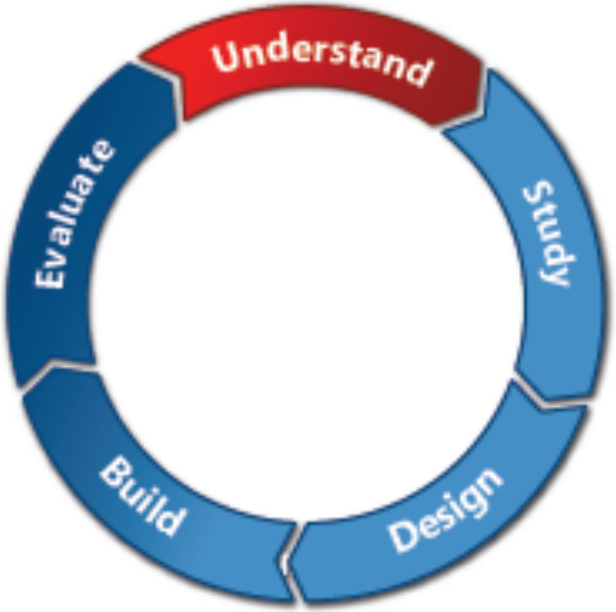


Double Diamond model – Design research council - http://www.designcouncil.org.uk

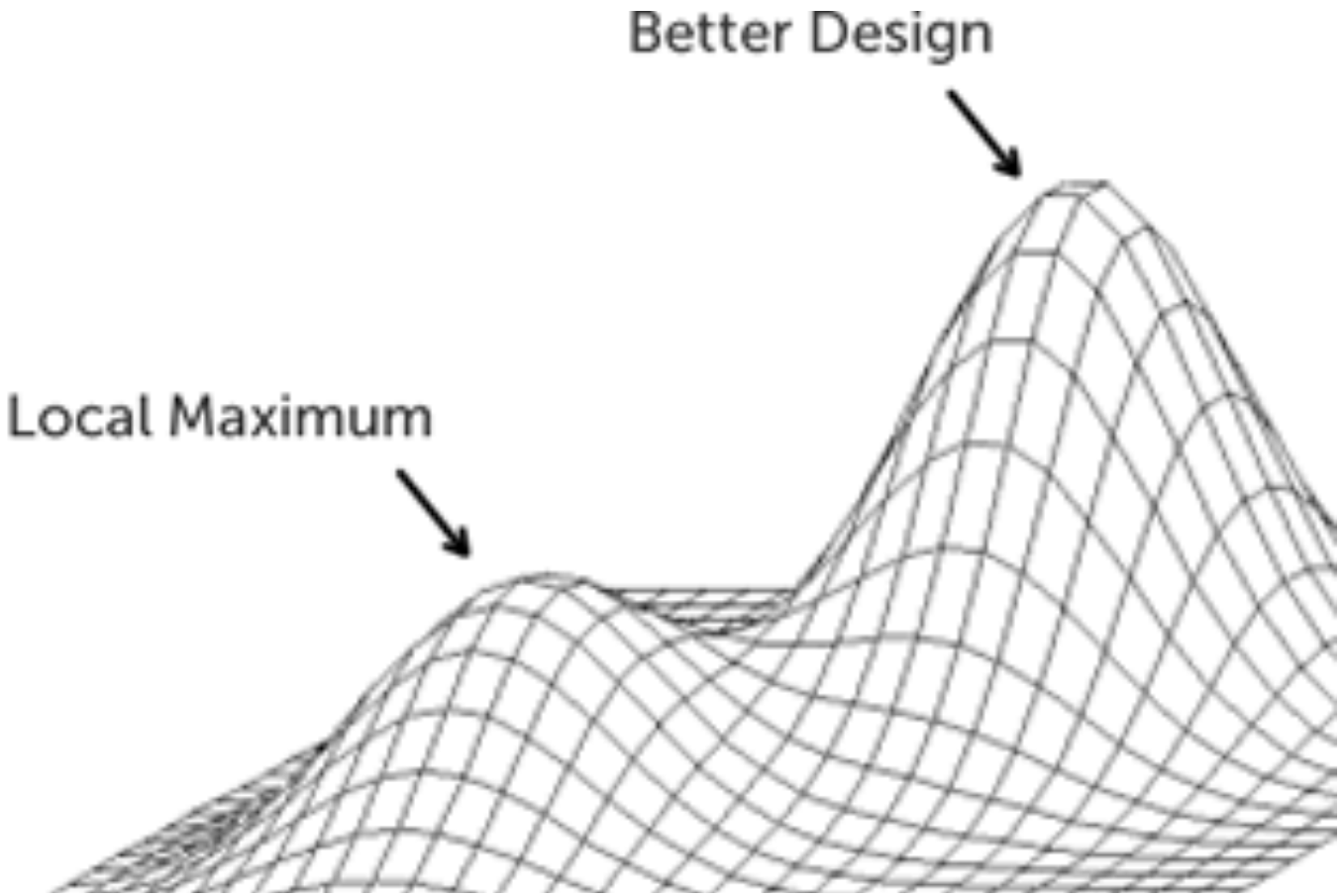

Aesthetic laborations
Experience clip (self-evaluation)
Fantastic product!
Design
Technical probes
Personas
Wizard of Oz
In the Wild! Empathy & Experience
(Auto-) ethnography
Auto-design
Interpretation
Design study
Cultural probes
Early testing: staged lived experiences
Brainstorming
Tiny fingers
Bodystorming
Inspirational Bits

Being Human: HCI in 2020

Microsoft Research 2008



Opening the design landscape



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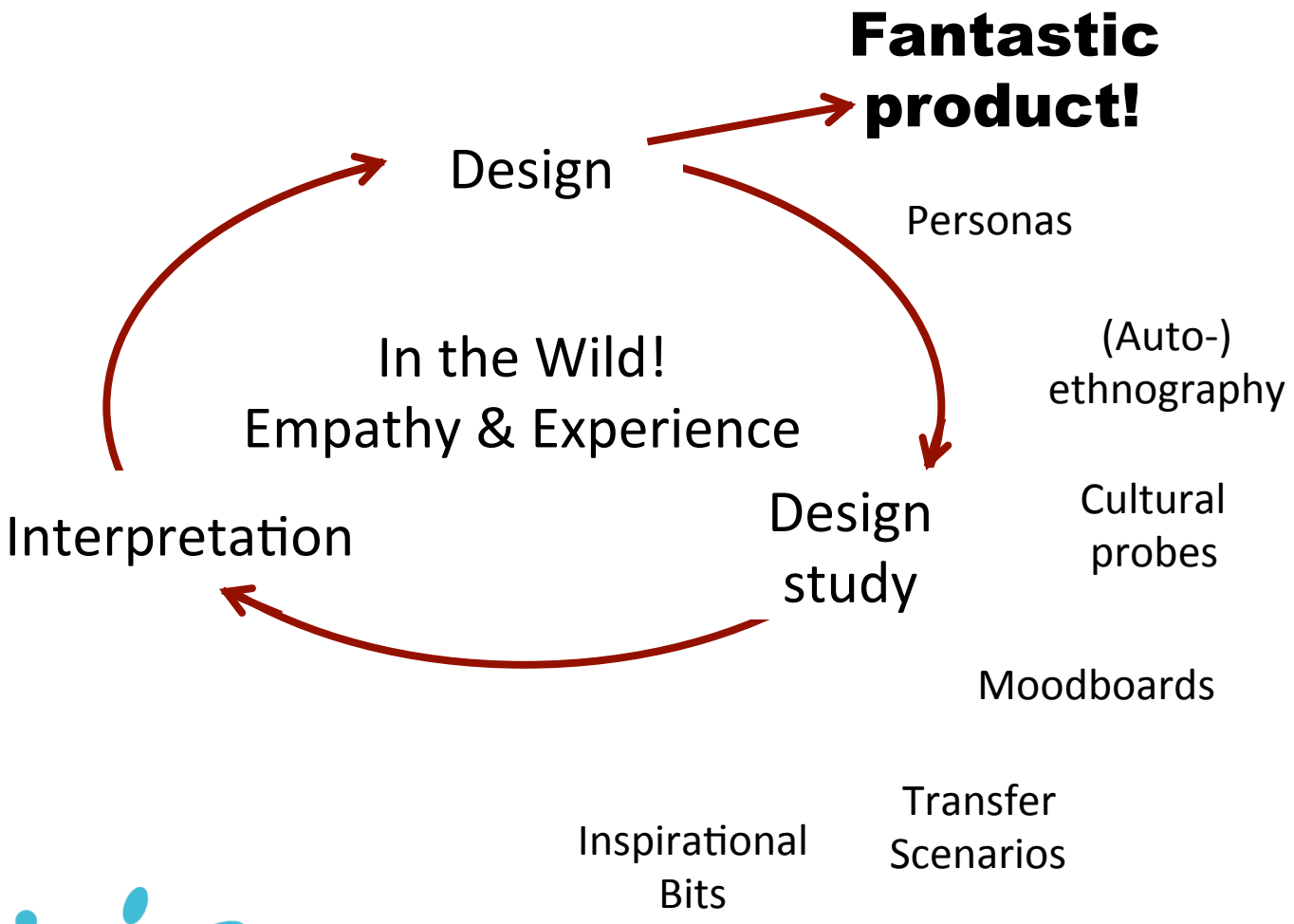
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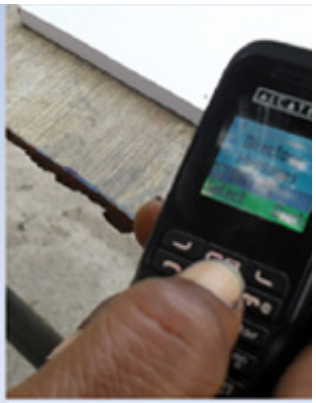


"PLEI-PLEI!"

Persona (& anti-persona) (Cooper 1999)

Sandra is a confident 29 year old woman who likes to spend time with her friends and family. She works as a trainee at a city planning office in Stockholm. Sandra does not care about how things work technically, but she likes new cool technological features and she is very happy with her new mobile.

Cultural probe (Gaver)

12 informants

- Elderly
- Teenagers
- Dance teachers

Lessons learnt

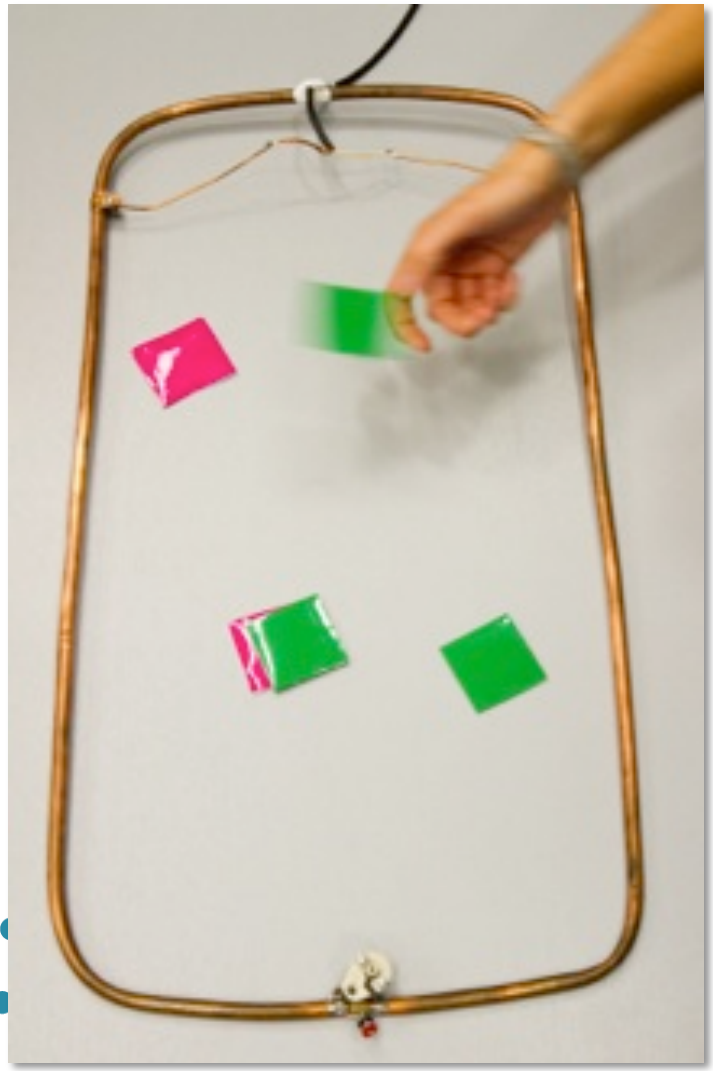
> About yesterday, today, tomorrow

> About someone/something

> Brooding, shedding, take the lid off

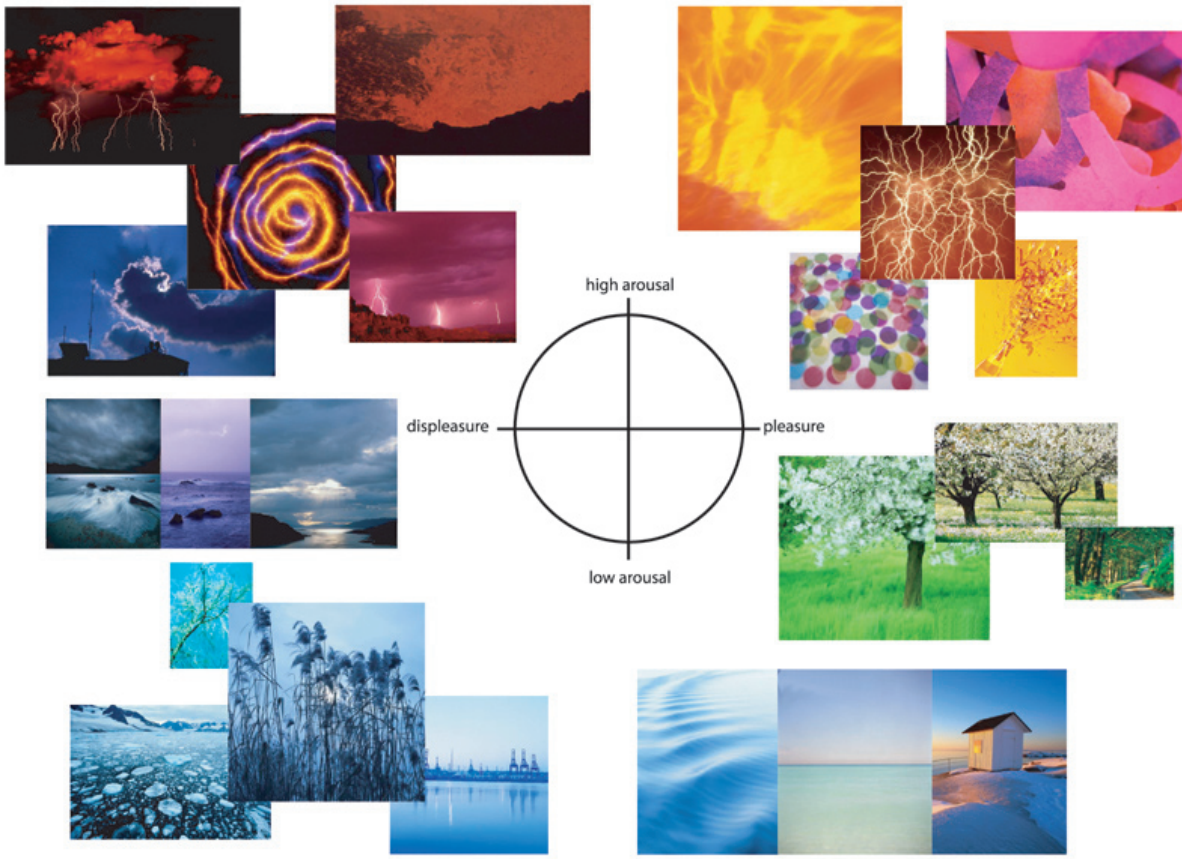
Transfer Scenarios (Ljungblad)

Bluetooth, rfid, accelerometers, radio, sensor nodes, topologies...



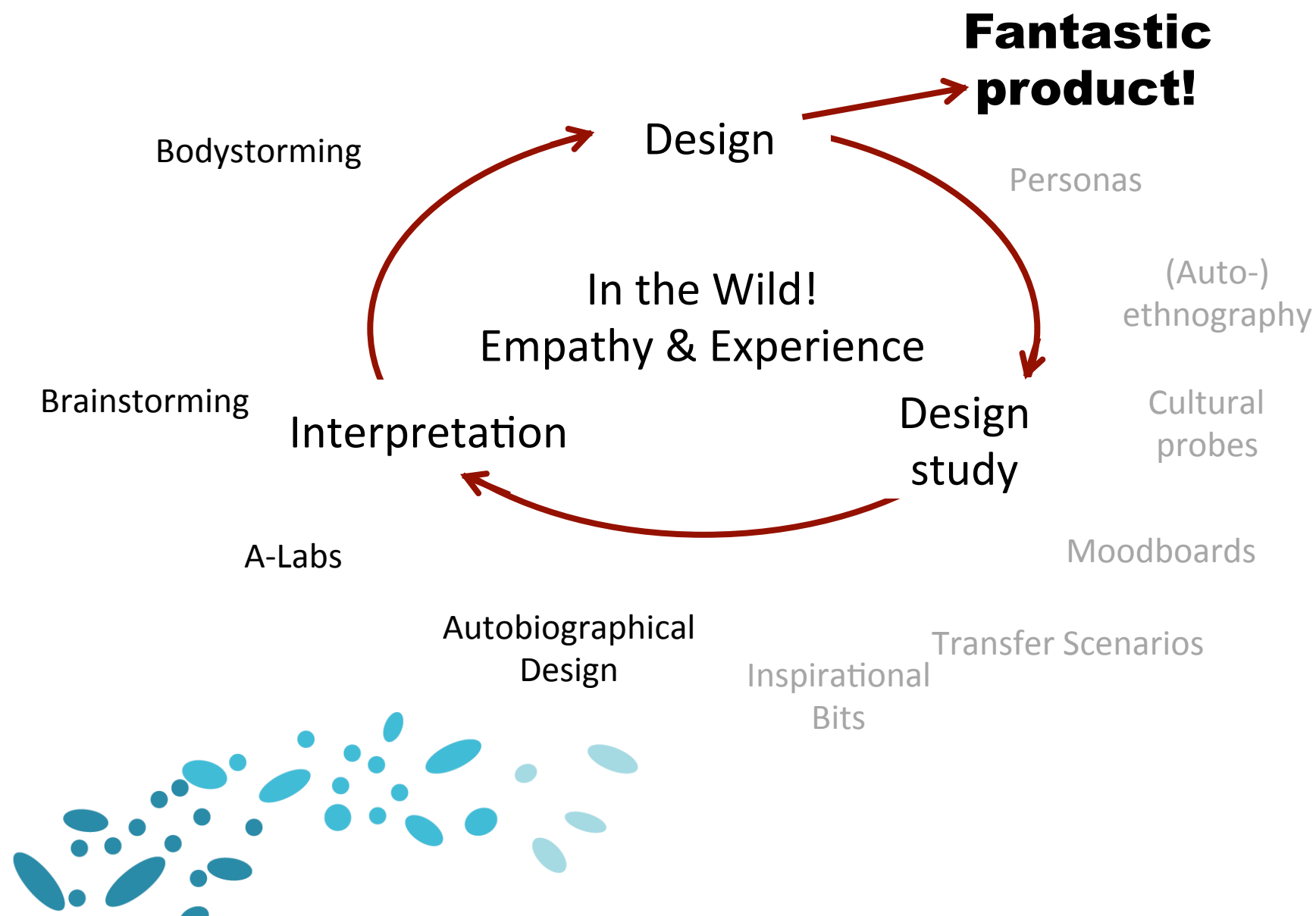
Wave Rave

Moodboards



Now we have loads of inspiration

- ... but how do we turn our inspiration into design ideas?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What if you actually drive inside of that?

Bo Andersson, founder of Grim, about *Ballistics* (2001)

Figur 6: Window's screensaver "Pipes"

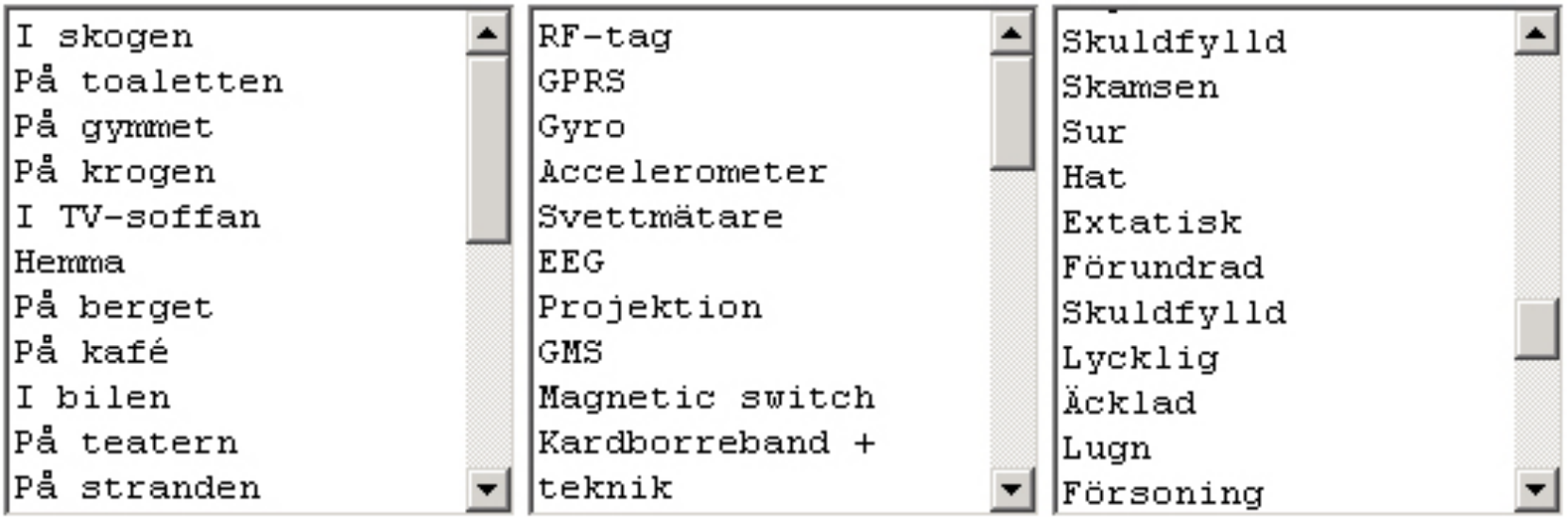
Brainstorming methods

- Only there to unlock your creativity
- Tons of different methods

Brainstorming rules

- You cannot be critical!
- The wilder the better
- Quantity is wanted
- Build on others'

RANDOM WORDS



Go!! På bio**** Blue tooth**** Känslor****

Six thinking hats (de Bono)

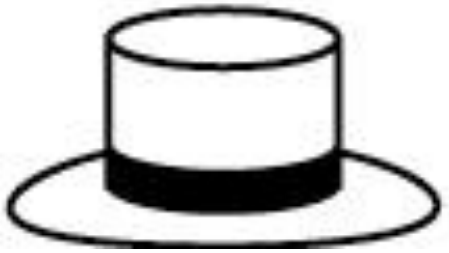
Regulates the process

Optimism

Creativity

Opinions and thinking

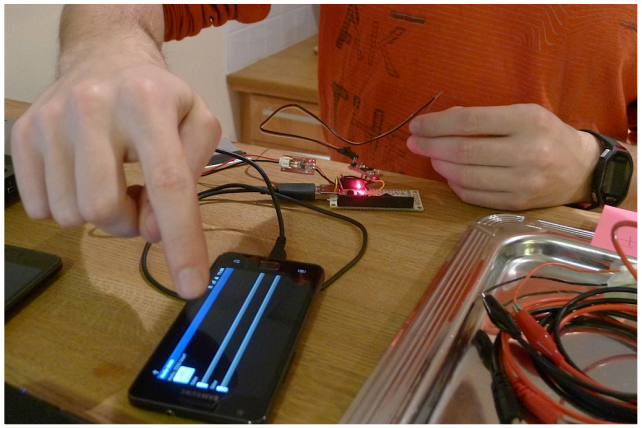
Cautiousness

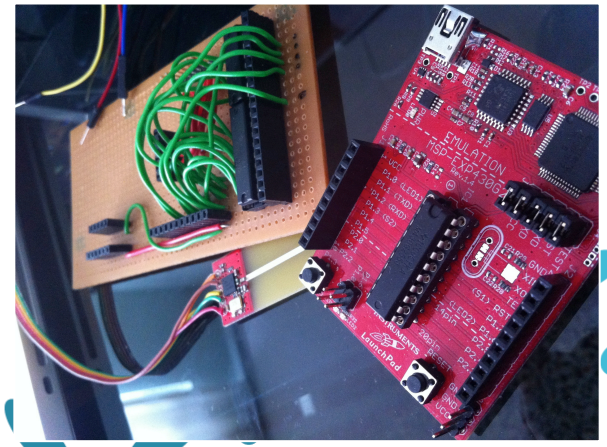


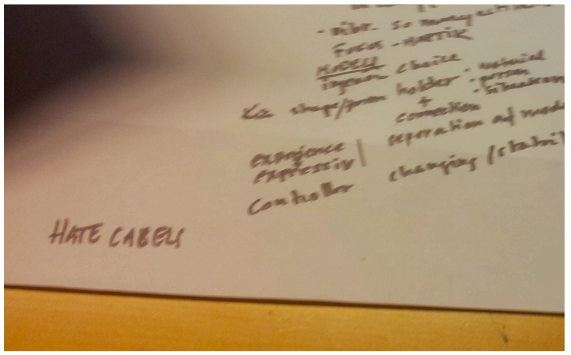
Facts and information

Bodystorming (Oulasvirta et al 2003)

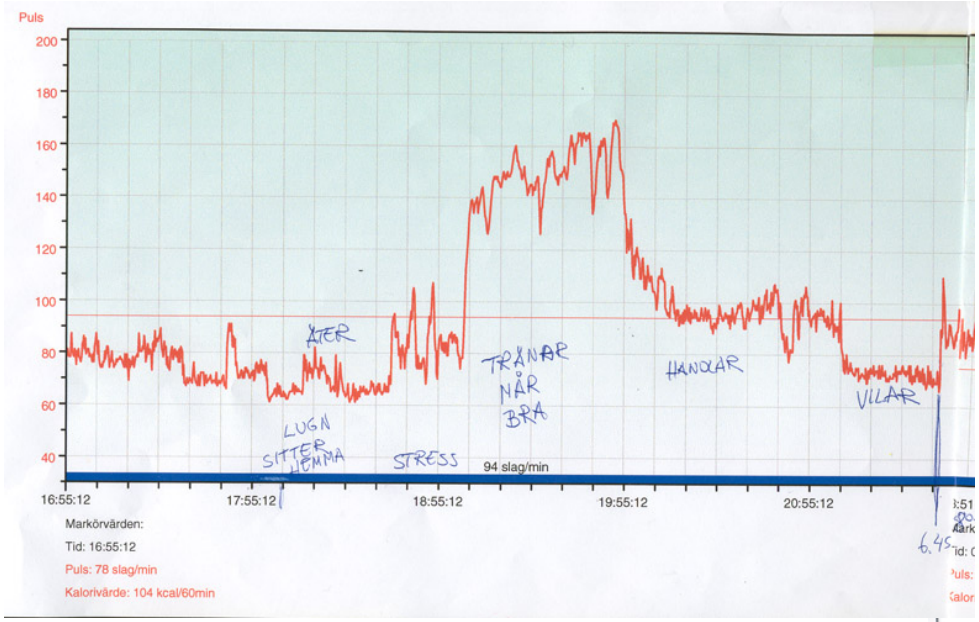
A-labs

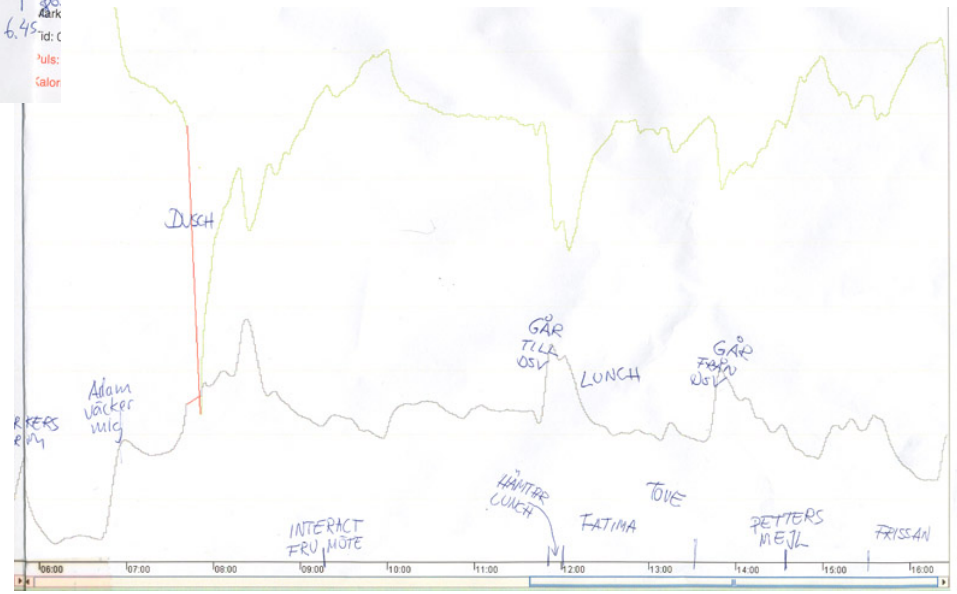






Autobiographical design



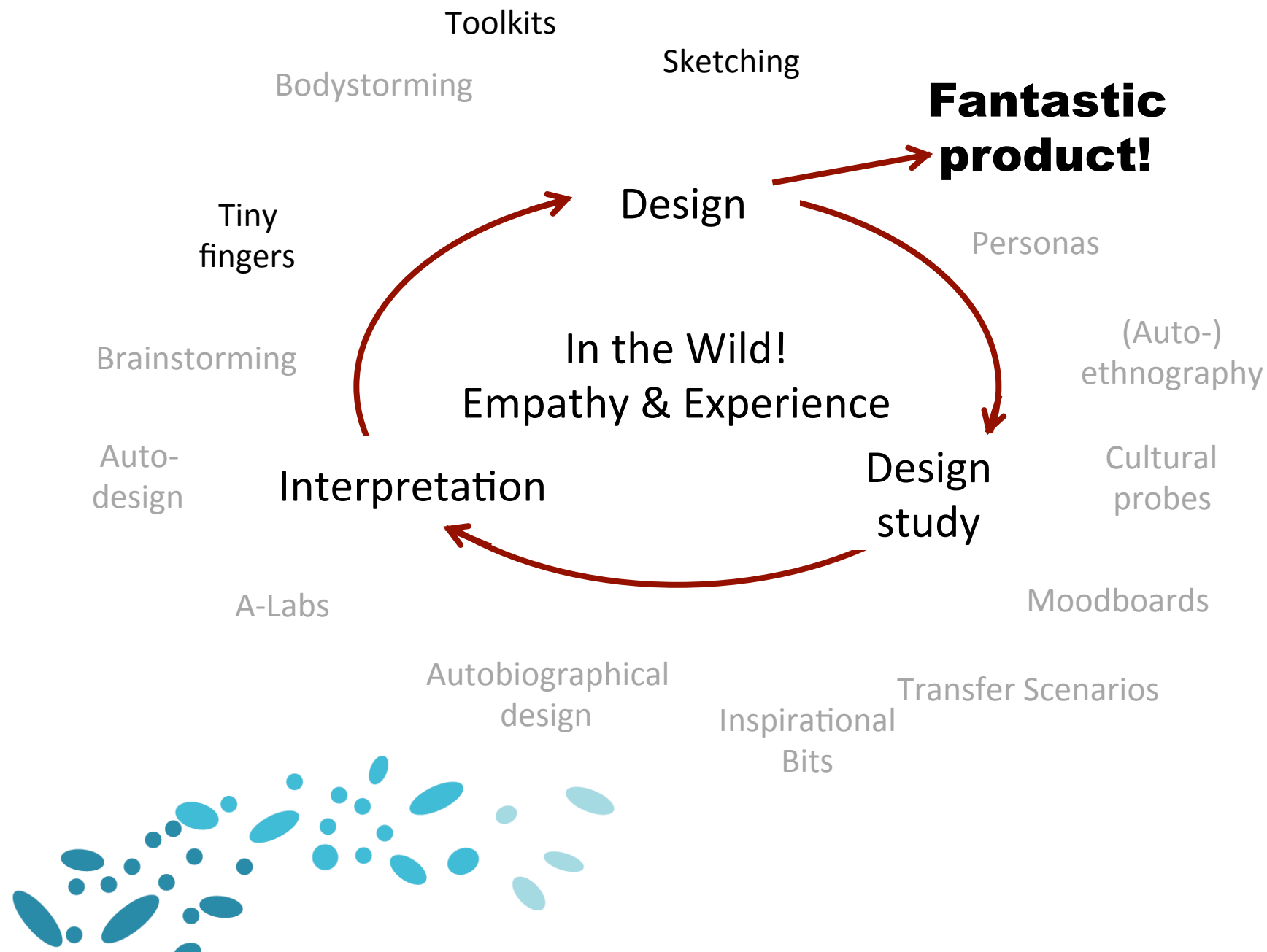


Alternatives to where ideas come from

- Customers tell you
- You build a sequel (often in the games industry)
- You have a strong vision from your long-term experience (auto-biographical design)
- You are a lead-user (Krippendorff)

Now we have 20 - 30 ideas...

- Make choice based on your criteria, qualities, ...
- Now we aim for 3 ideas to be presented to our customer – but we need to be sure they work!


Toolkits
Sketching
Bodystorming
Fantastic product!
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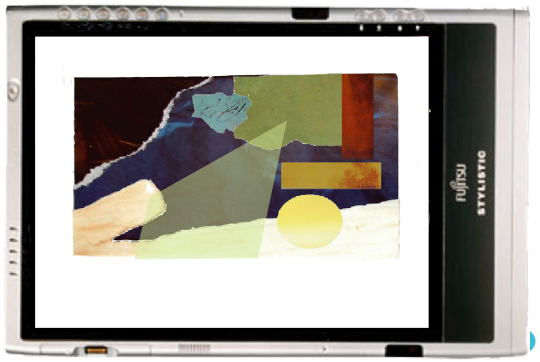
Tiny fingers (Rettig, 1994)

Sketching

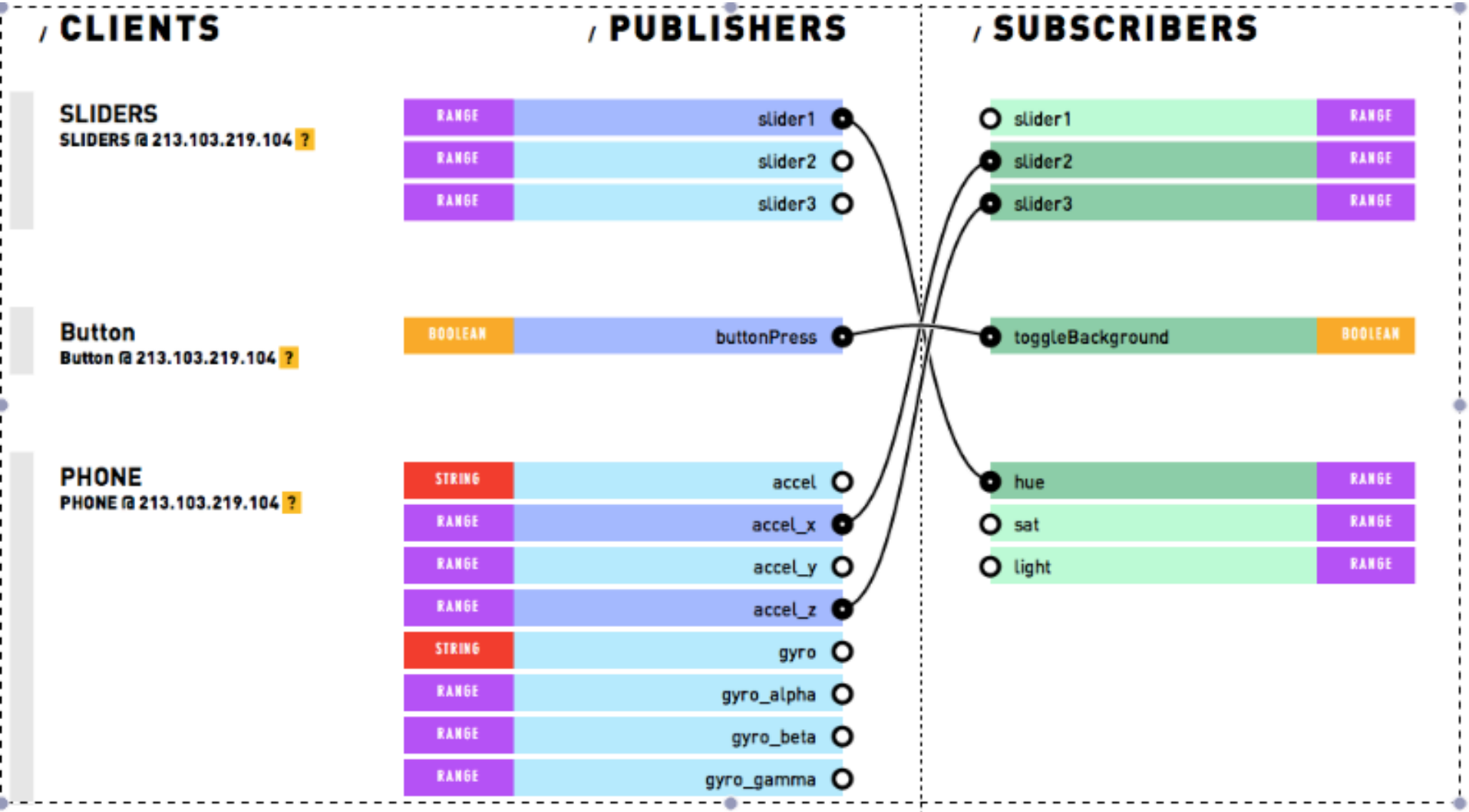


22 C
Library
History
Jul 1
Jul 2
Jul 3
Jul 4
Sleep
Energy Expenditure
Step Counter
Sexual
Pulse
12:35
Jessica Andersson
July 15

July 15 2005
Jessica Andersson

Brainstorming toolkits

- Arduino
- Phidgets
- Lilypad Arduino
- rFlea
- ...


CLIENTS
PUBLISHERS
SUBSCRIBERS
SLIDERS
SLIDERS @ 213.103.219.104 ?
RANGE slider1
RANGE slider2
RANGE slider3
slider1 RANGE
slider2 RANGE
slider3 RANGE
Button
Button @ 213.103.219.104 ?
BOOLEAN buttonPress
toggleBackground BOOLEAN
PHONE
PHONE @ 213.103.219.104 ?
STRING accel
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STRING gyro
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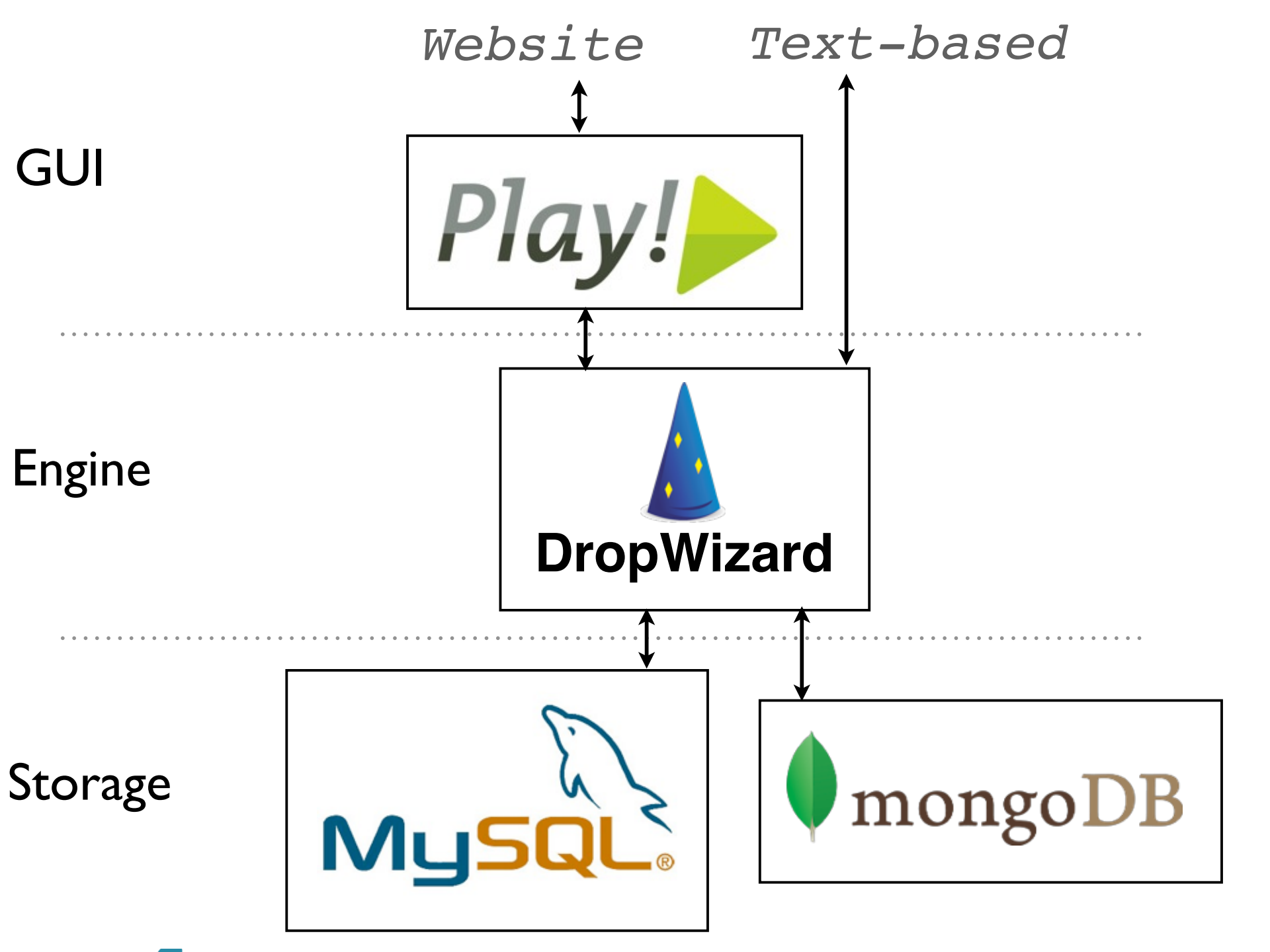
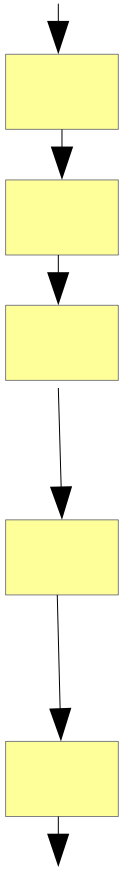
sat RANGE
light RANGE


Website
Text-based
GUI
Play!
Engine
DropWizard
Storage
MySQL
mongoDB

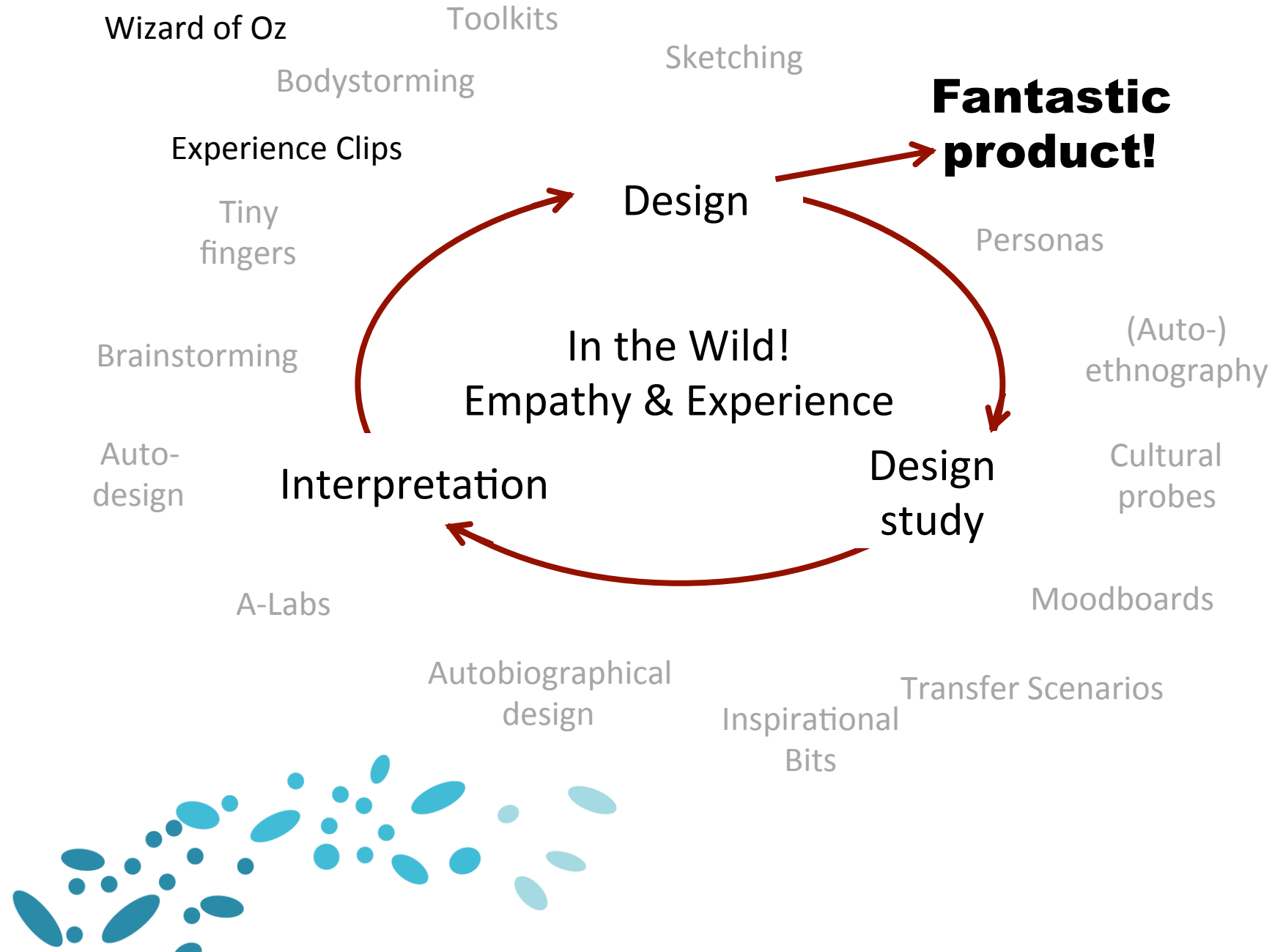
Ski example

- Raw accelerometer data
- Gravity-rotated data
- Noise removal
- Cut up in periods and resample
- Markov chain
- Classification, anomaly detection, clustering
- Various key performance indices



Now we have three ideas...

- Reasonably well-grounded in tech affordances
- But what do prospective users think? Can we test them with users in realistic settings before the properly exist? (Might save us loads of money!)
- And how do we get their honest opinions?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Wizard of Oz (Dahlbäck 1993)

Experience clip (self evaluation) (Isomursu, 2004)

Now we have something to work on

- The devil is in the details
- Hack, rehack, test, ...
- How do we evaluate?
  - Here is where those usability methods come in!
  - But also testing for experience – how?

Lodestars
Wizard of Oz
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Keeping a large team together!

Lodestars

Lodestars don't have to be digital. Verbal lodestars and still images can be printed on paper and hung on the walls, characters and game objects can be modeled in clay and displayed in strategic places, and all kinds of physical objects can be used to illustrate for instance the look and feel of the game.

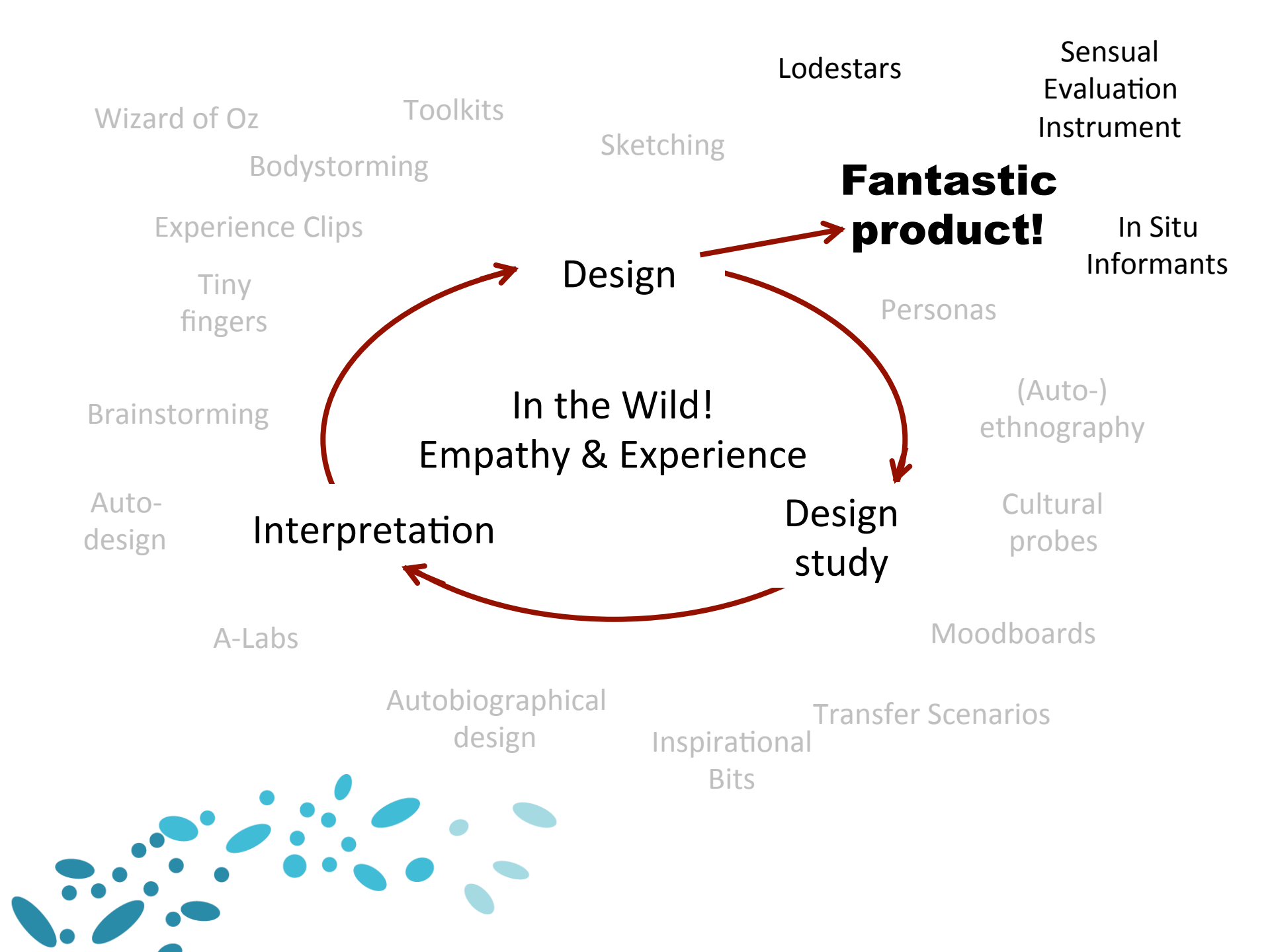
This actually, was one of the original designs of Skyrim - what is the experience of Skyrim? I bought this Conan action figure like years ago, just sitting on my desk. People would say: So, what are we doing for the next Elder Scroll, now?" I just point to the figure... ([Howard, 2012])

Figur 14: Concept art for Skyrim. Lodestar for how dragons *feel*

Figur 8: Collage of snapshots from horror and sci-fi movies used as lodestars for Dead Space (2008).

Product is taking shape...

- ... but how do we evaluate experiences?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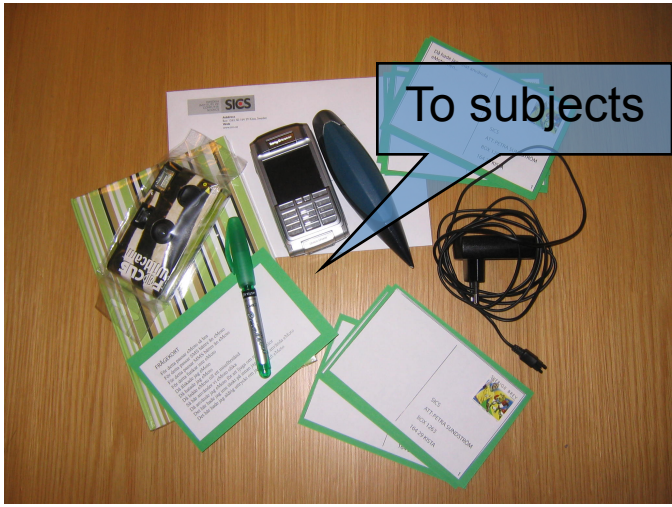
Sensual Evaluation Instrument

(Isbister et al. 2006)

In Situ Informants (Sundström et al. 2007)



Obviously not true...

- All mixed
- See methods as tools to unplug creativity and keep structure

My aim today

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- Bring in technology ALL THE TIME! Not expensive!
- Do not be scared to try stuff on yourself – but do not assume that you are like everyone else
- Focus on experience
- Be creative!
- Create MORE THAN ONE IDEA!