

Skipo

TEAM 3 – SKIN PROTECTION

OVERVIEW

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- ▶ Process
- ▶ Idea
- ▶ Research Skin
- ▶ Research Material
- ▶ Goals
- ▶ Field of Application
- ▶ Reflection
- ▶ Future Forecast

process

3

- ▶ Build a group



GROUP 3

Sevak (BA)

Philip (A)

Christoph (BA)

Manuela (A)

process

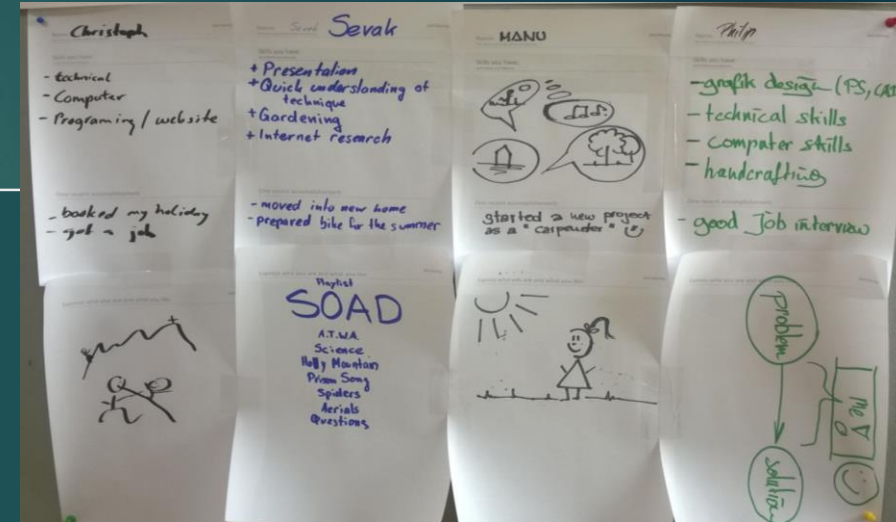
► Skill share

Skills

- handcraftig
- 3D - modeling
- Visualisation
- Computer knowledge
- Presenting skills

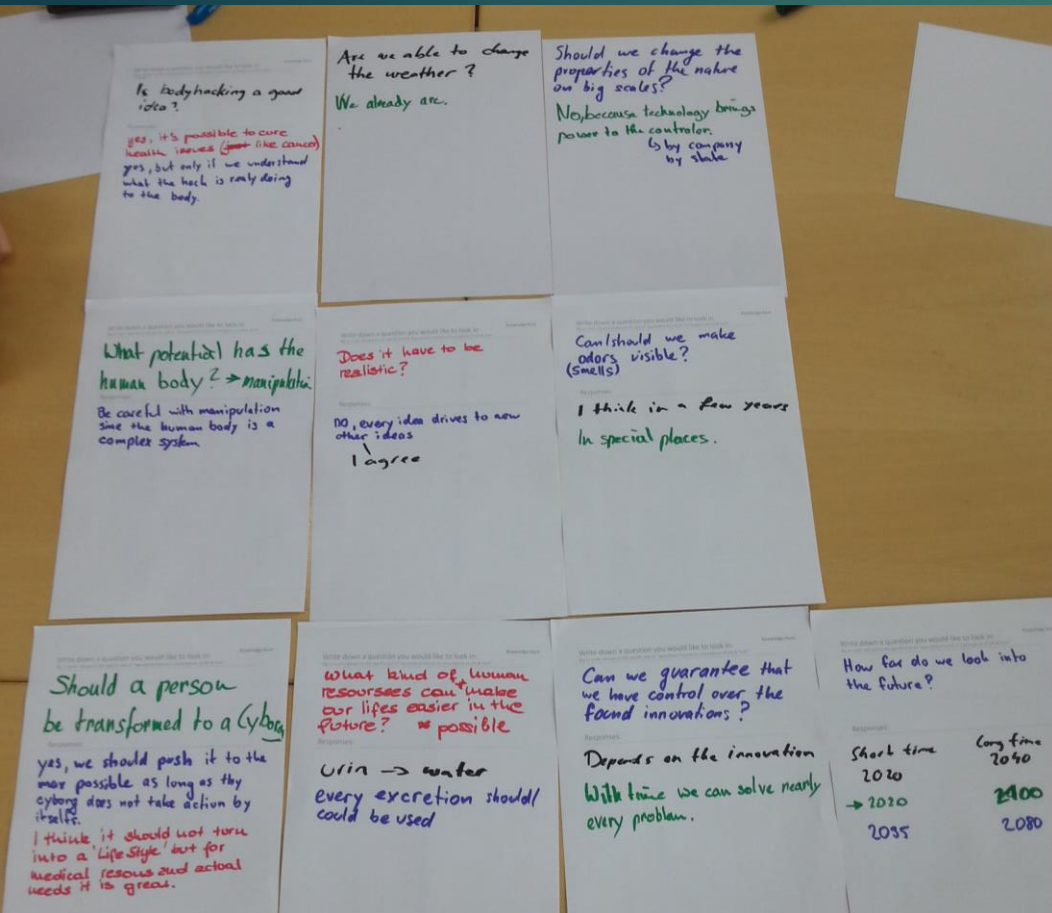
Needed

- Technical knowledge
- Background information
- Expert feedback



process

▶ Knowledge hunt



- ← 1 Step: Questions and Answers
- ← 2 Step: choose ideas and topics and order them along a arrow from easy to impossible
- ← 3 Step: put a star next to the top ideas


process

▶ Jam session

Excretion recycling

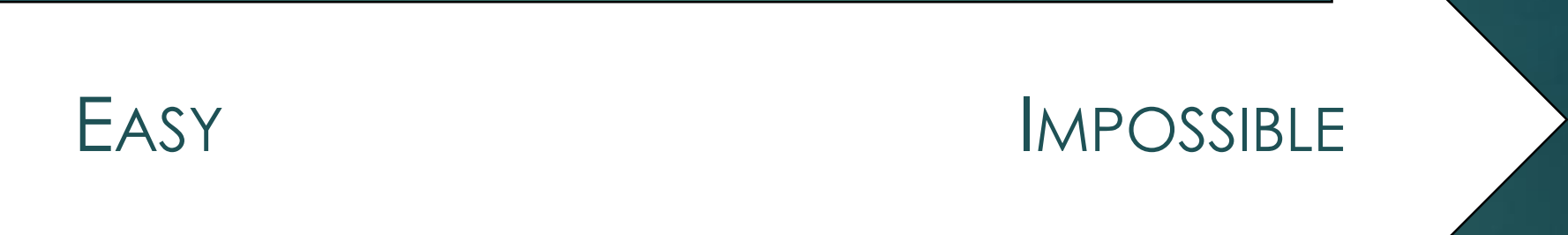
Odor visibility

Remote controlled body

Shock resistant body 

Human brain transplant

self healing



efficient food digestion

changing skin color

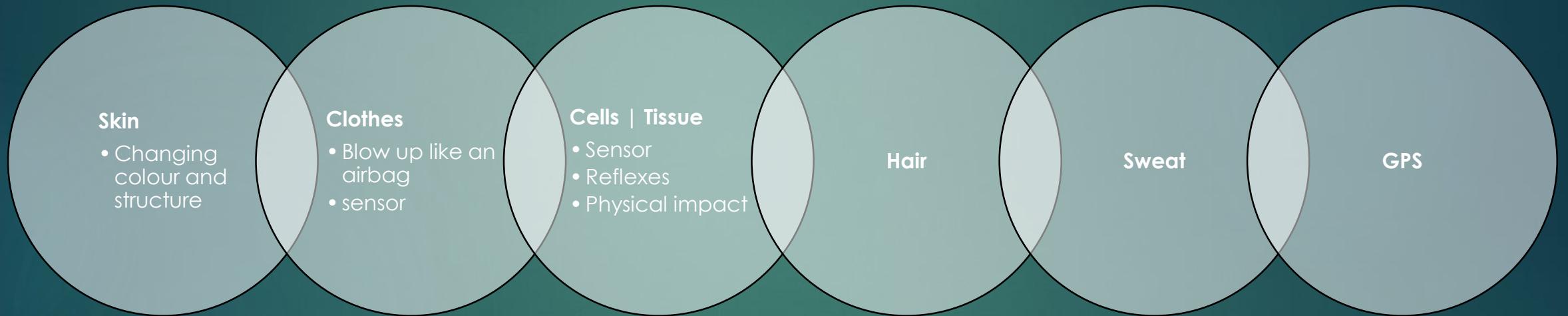
eye manipulation

body temperature adjustment

muscle support

process

▶ Idea remix – shock resistant body



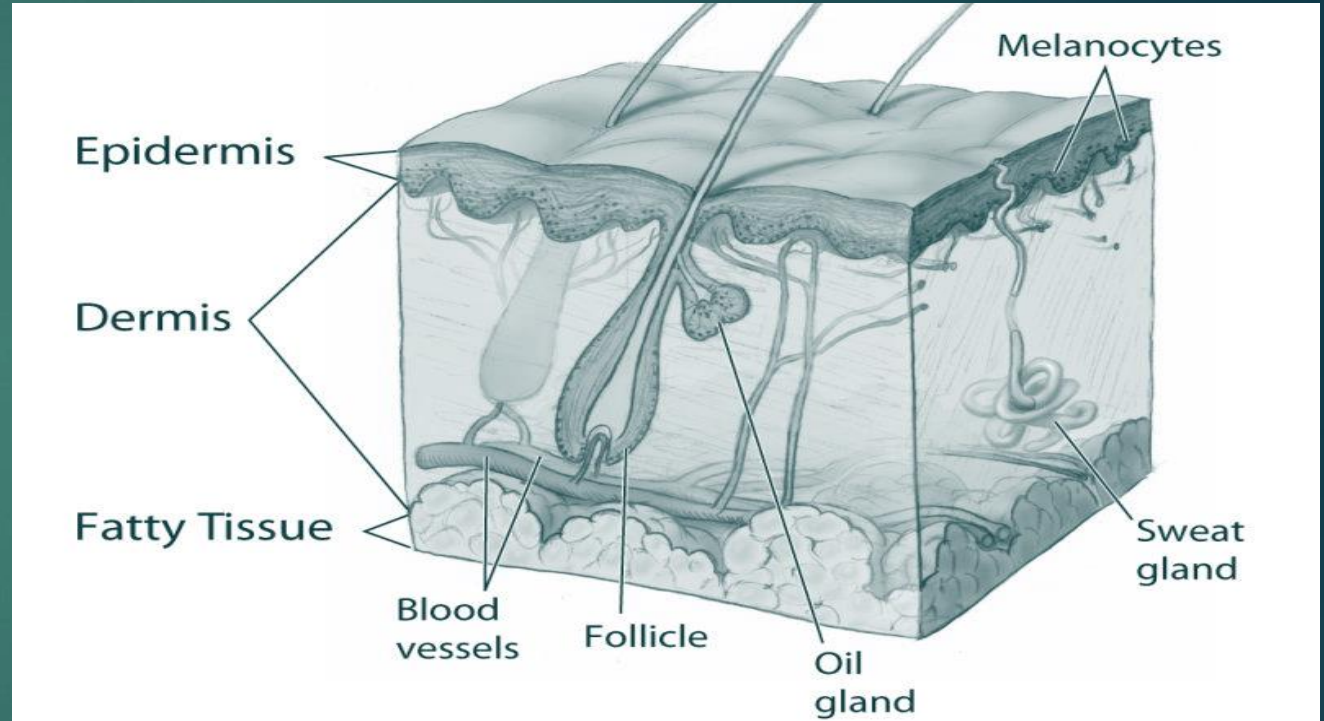
Skipo

- ▶ Nanoscale
- ▶ Additional protection layer
- ▶ Shock resistant
- ▶ Stab resistant
- ▶ Flexible



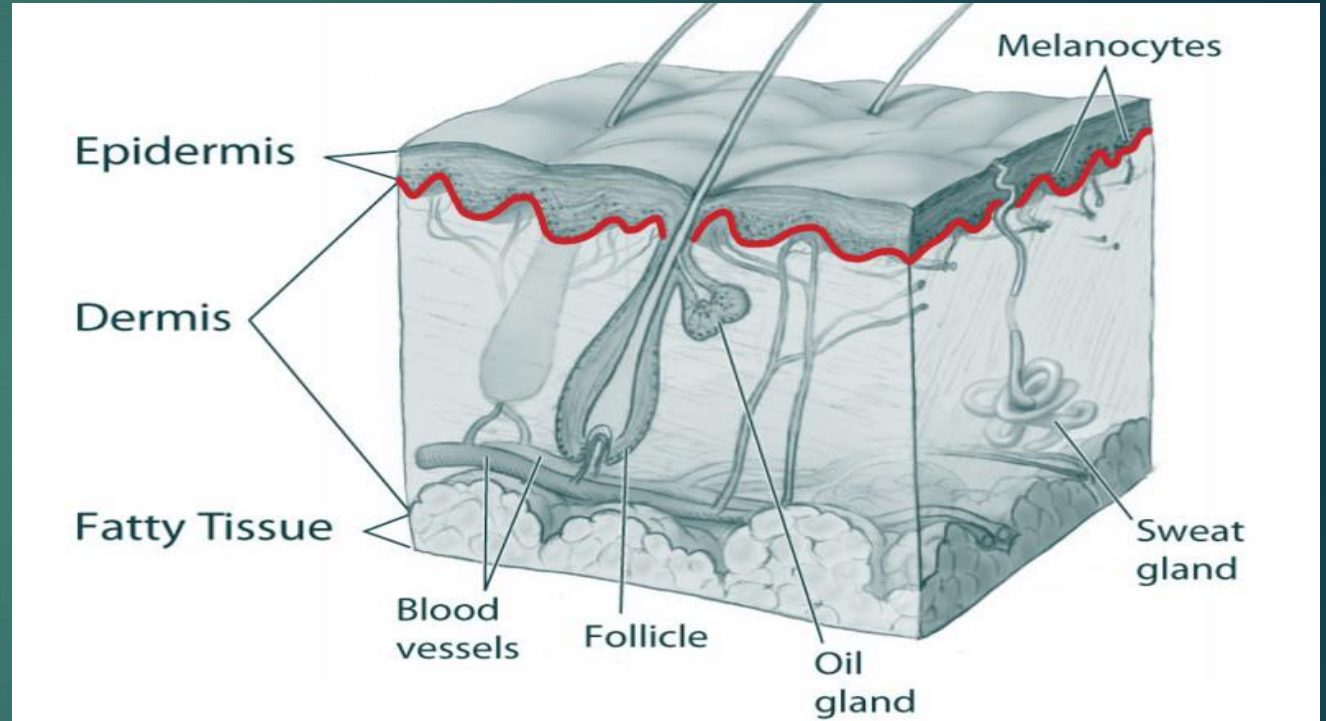
Research Skin Layers

- ▶ Epidermis: self healing layer no big need for protection
- ▶ Dermis: most important skin layer with many sub-functions, needs protection
- ▶ Fatty Tissue: easy to build hard to reduce



Skipo applied

- ▶ Adding an additional Skipo nano skin layer for protection
- ▶ Connection with nerve system
- ▶ No restriction of skin functions by Skipo (sweating, hair growth, feelings)



Ideas how to make it work



injection



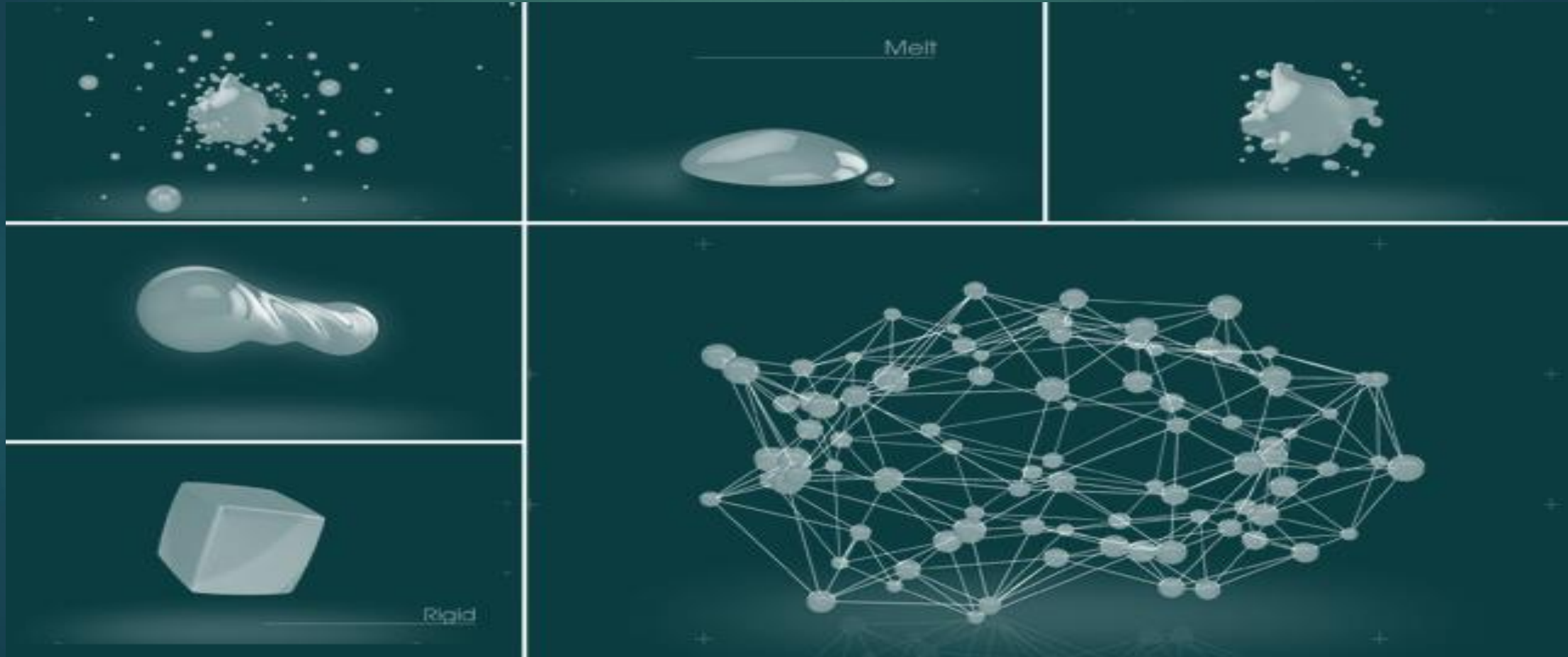
creme



air bag suit

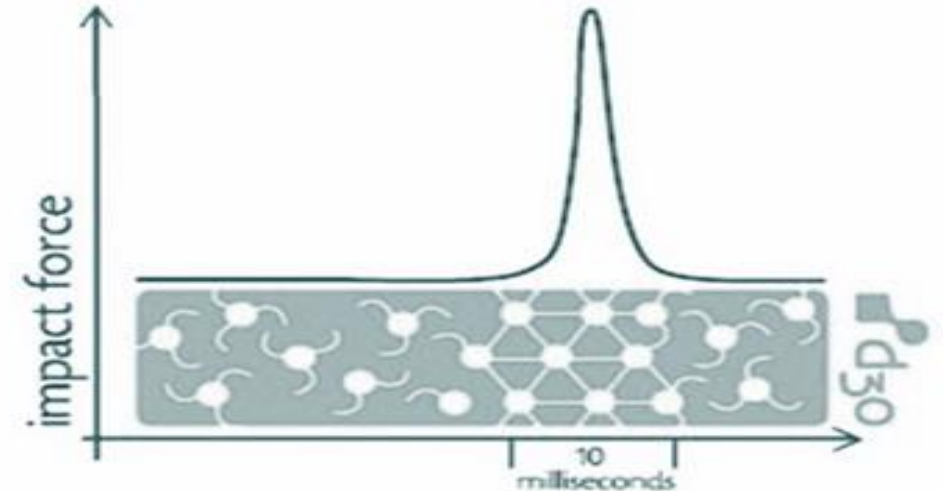
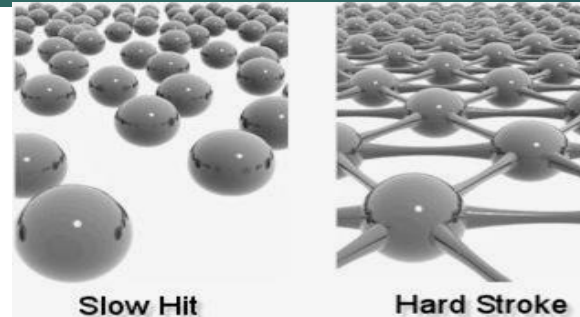
Material Research

- ▶ Searching for the right `protection` material

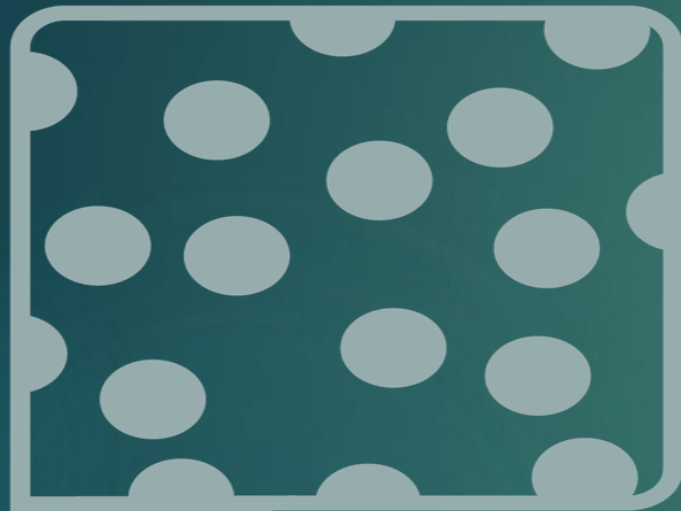


Material Research

D3O is a specially engineered material made with intelligent molecules that flow with you when you move but on shock lock together to absorb the impact energy.

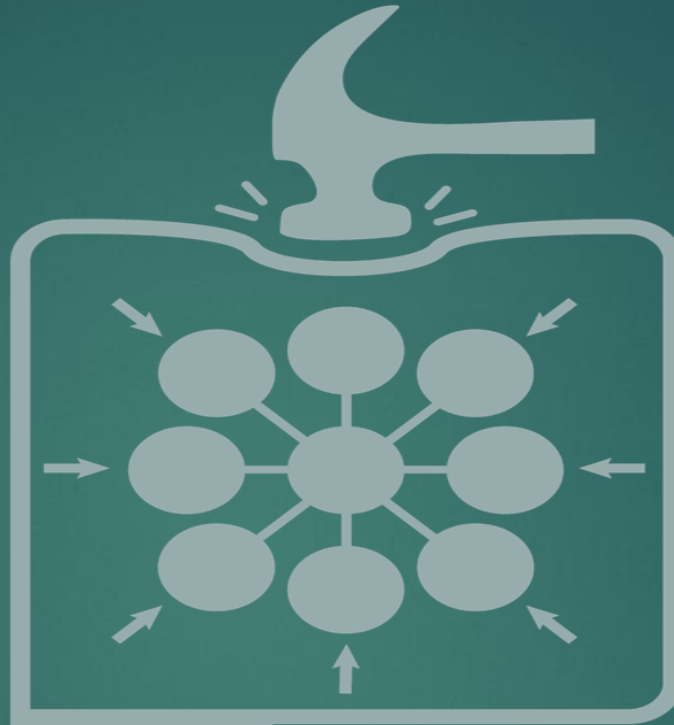


How it works



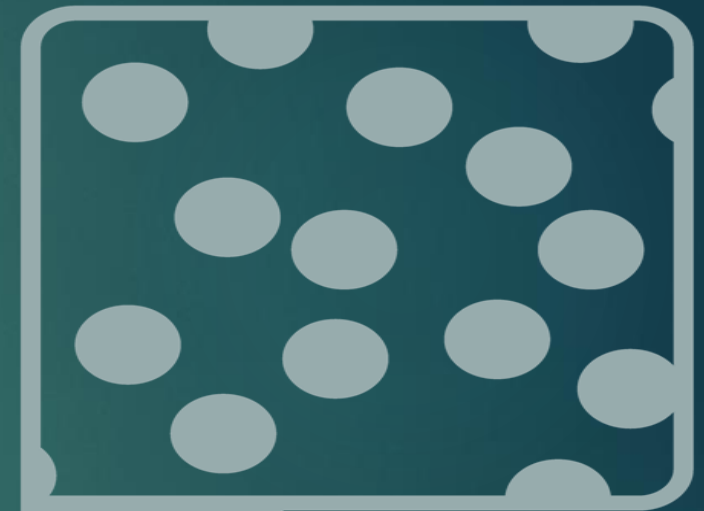
1

SOFT &
FLEXIBLE



2

LOCKS ON
SHOCK



3

RETURNS TO
FLEXIBLE STATE

How it works

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The molecules lock locally together on shock

How it works

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D3O Protective Material in CCM Gear.mp4

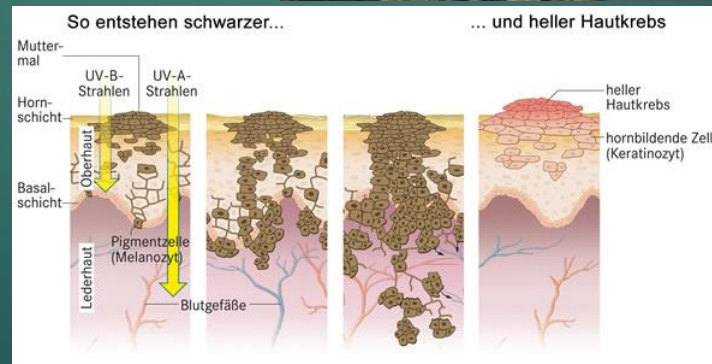
Goal

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- ▶ Smart protector
- ▶ Protection of the human body and organs
- ▶ Protection of the sensible skin layer
- ▶ Invisible protection layer under the skin
- ▶ Connection of Skipo with nerve system and brain

Field of application

Every situation where the skin is under danger of being damaged

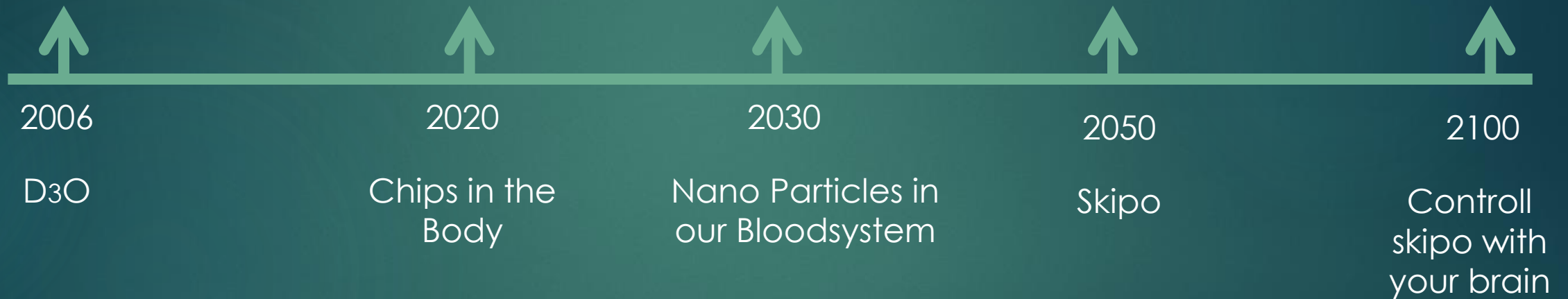


Problems (Solution)

- ▶ Reaction (Skipto activates if strong force is applied)
- ▶ Operation (no resistance if force applied slow)
- ▶ Feelings (Skipto only activates if strong force is applied)
- ▶ Fun vs danger (no solution jet, future research with the goal to connect the protection layer with the brain)
- ▶ Skin-cancer (Skipto protects only the dermis, future research needed for all layer protection)

Future Forecast

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THANK YOU