



HBO-Engineering



Conferentie

MAAK HET ENGINEERING ONDERWIJS VAN MORGEN



#HBOengineering2019

STUDENTEN INSPIREEREN? GEBRUIK DESIGN BASED EDUCATION!

Johan Postema

Projectleider Design Based Education bij
NHL Stenden Hogeschool

Conferentie

MAAK HET ENGINEERING ONDERWIJS VAN MORGEN



#HBOengineering2019



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WiFi: sms 'HBOE' naar 06-35 777 876

DESIGN BASED EDUCATION

**Projectleider DBE:
Johan Postema**

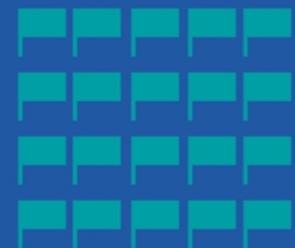
Welkom en wat gaan we doen?

- Introductie DBE op NHL Stenden
- Actief bezig met een design challenge
- Pitchen

FACTSHEET



24000
STUDENTS



90+
STUDENT
NATIONALITIES

CA 15%
INTERNATIONAL
STUDENTS



MULTI
CAMPUS
UNIVERSITY

2000
ACADEMIC
STAFF



DESIGN
BASED
EDUCATION



12
ASSOCIATE'S
DEGREES

51
MINORS



14
ACADEMIES

44
PROFESSOR-
SHIPS



73
BACHELOR'S
DEGREES

17
MASTER'S
DEGREES

Welke rollen (her)kennen we?



The Shadow



The Wizard



The Boss



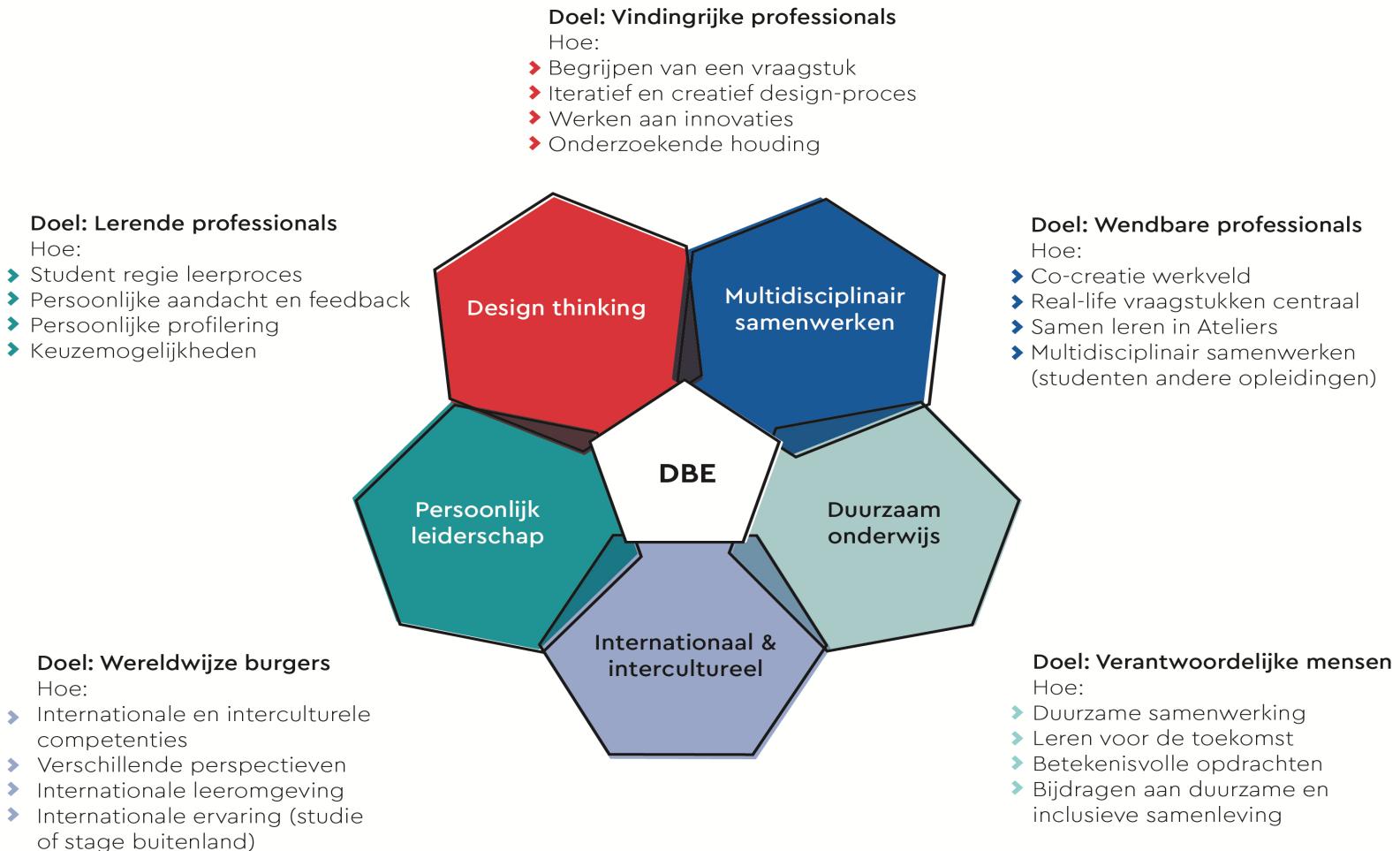
The Deputy



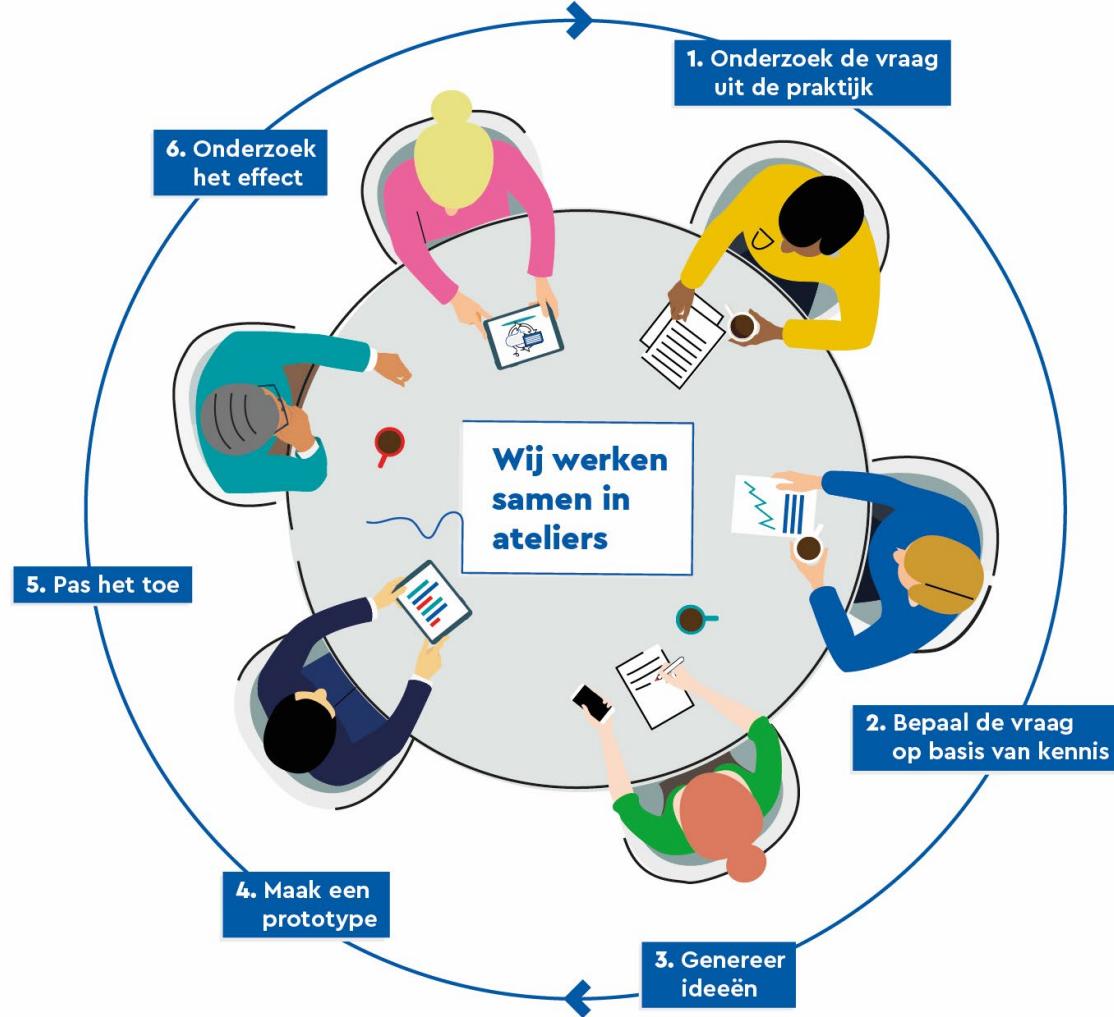
The Critic

VIJF FACETTEN VAN DBE

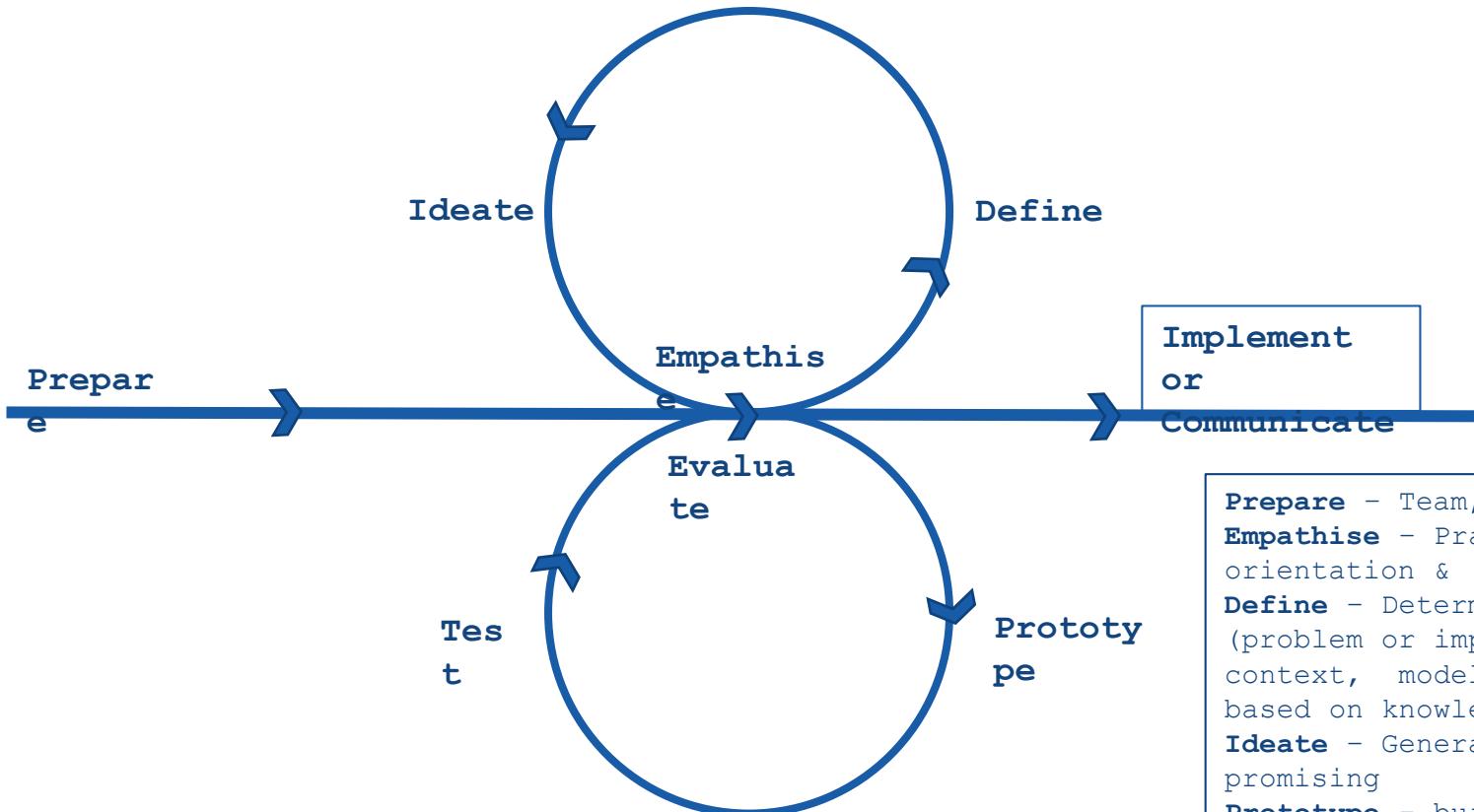
De 5 facetten van Design Based Education



DBE, DE 6 FASES

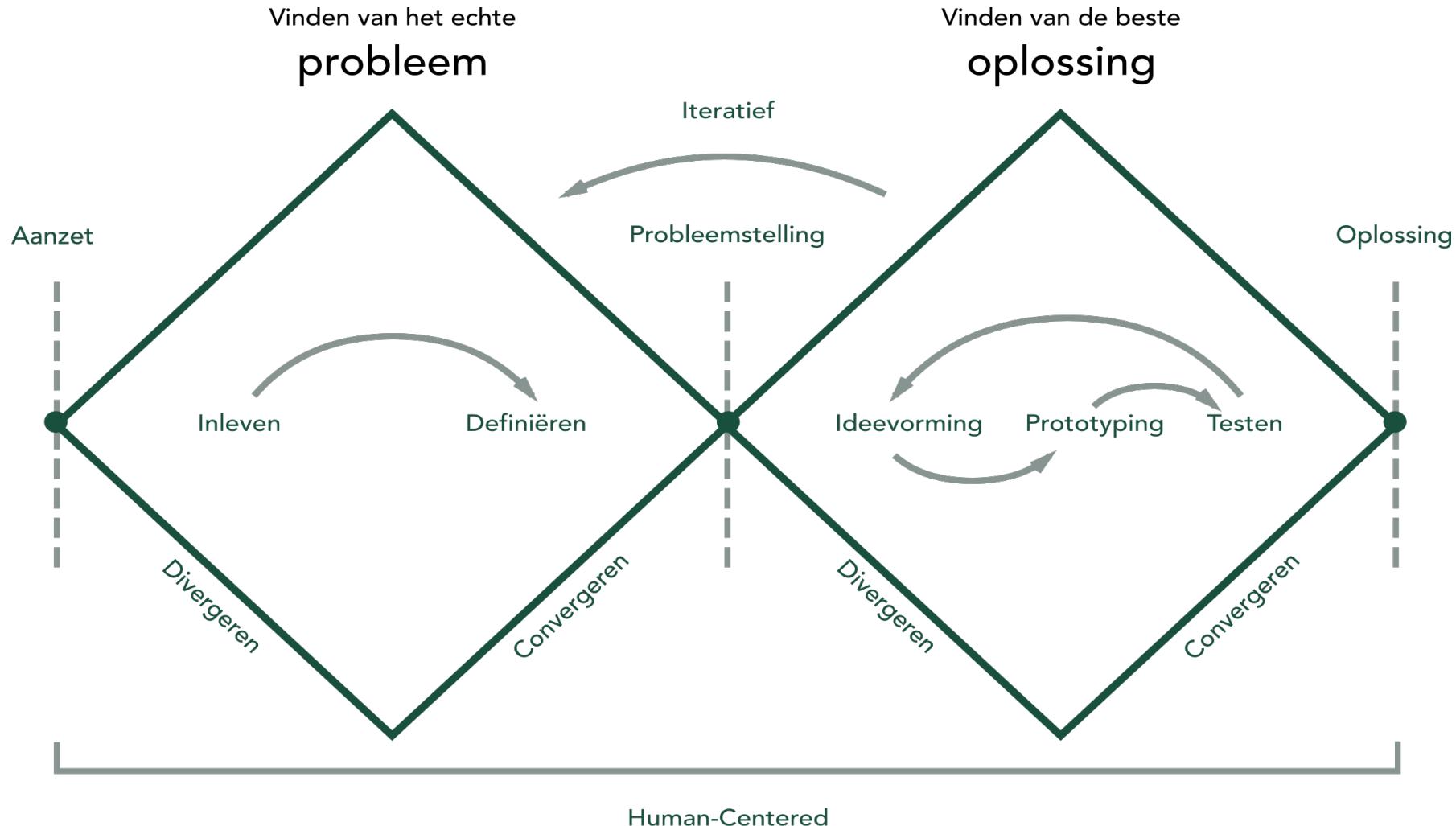


DBE cycle

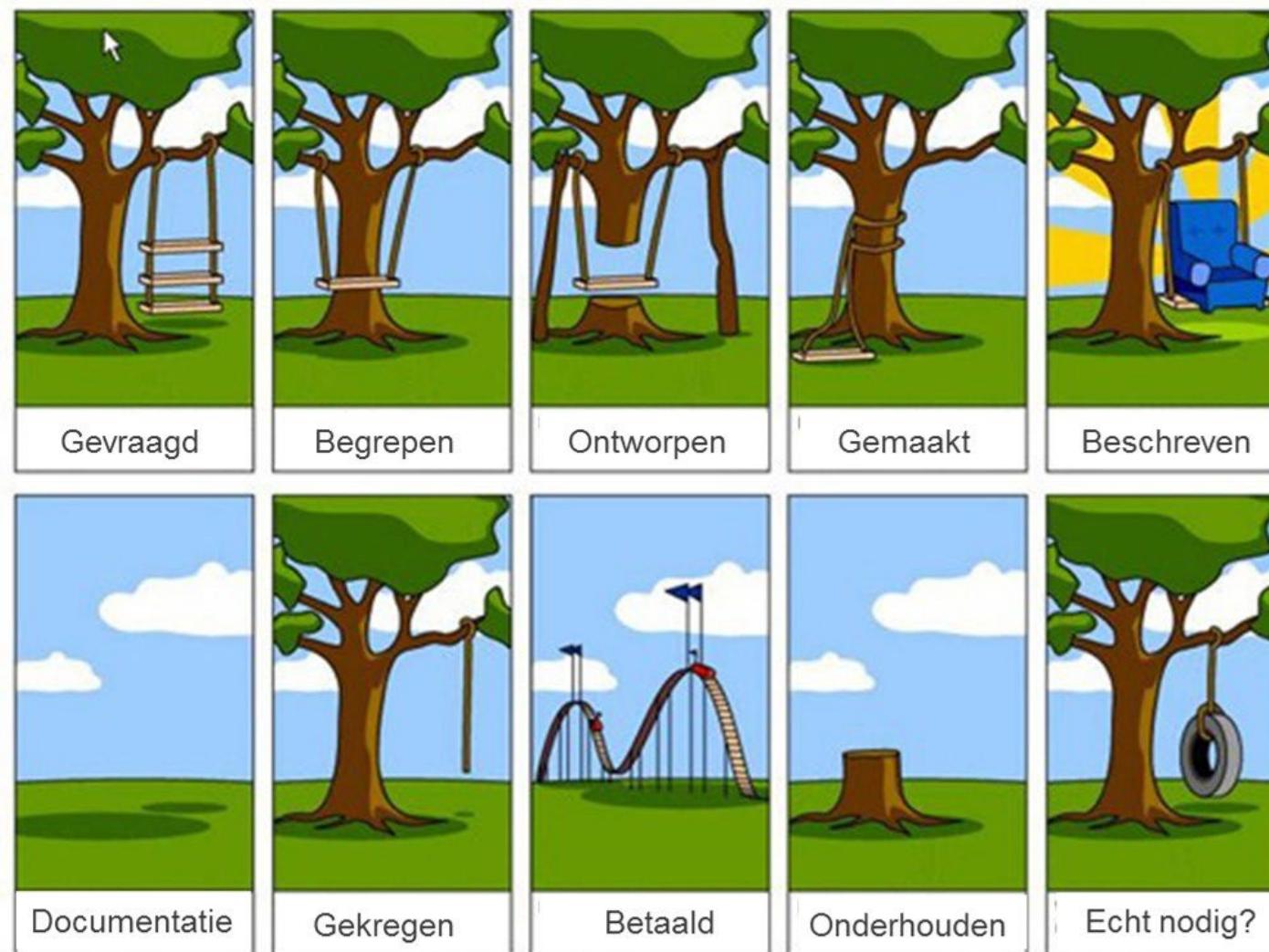


Prepare - Team, tools & workspace
Empathise - Practice based research: orientation & needs analysis.
Define - Determine research question (problem or improvement space), context, modelling & design direction based on knowledge
Ideate - Generate ideas & select most promising
Prototype - build, sketch, visualise, film, Using motivated assumptions and theories.
Test - Apply and validate prototype: aspects & assumptions
Evaluate - Research effects and reflect on theoretical insights & process / approach
Implement or Communicate - implement

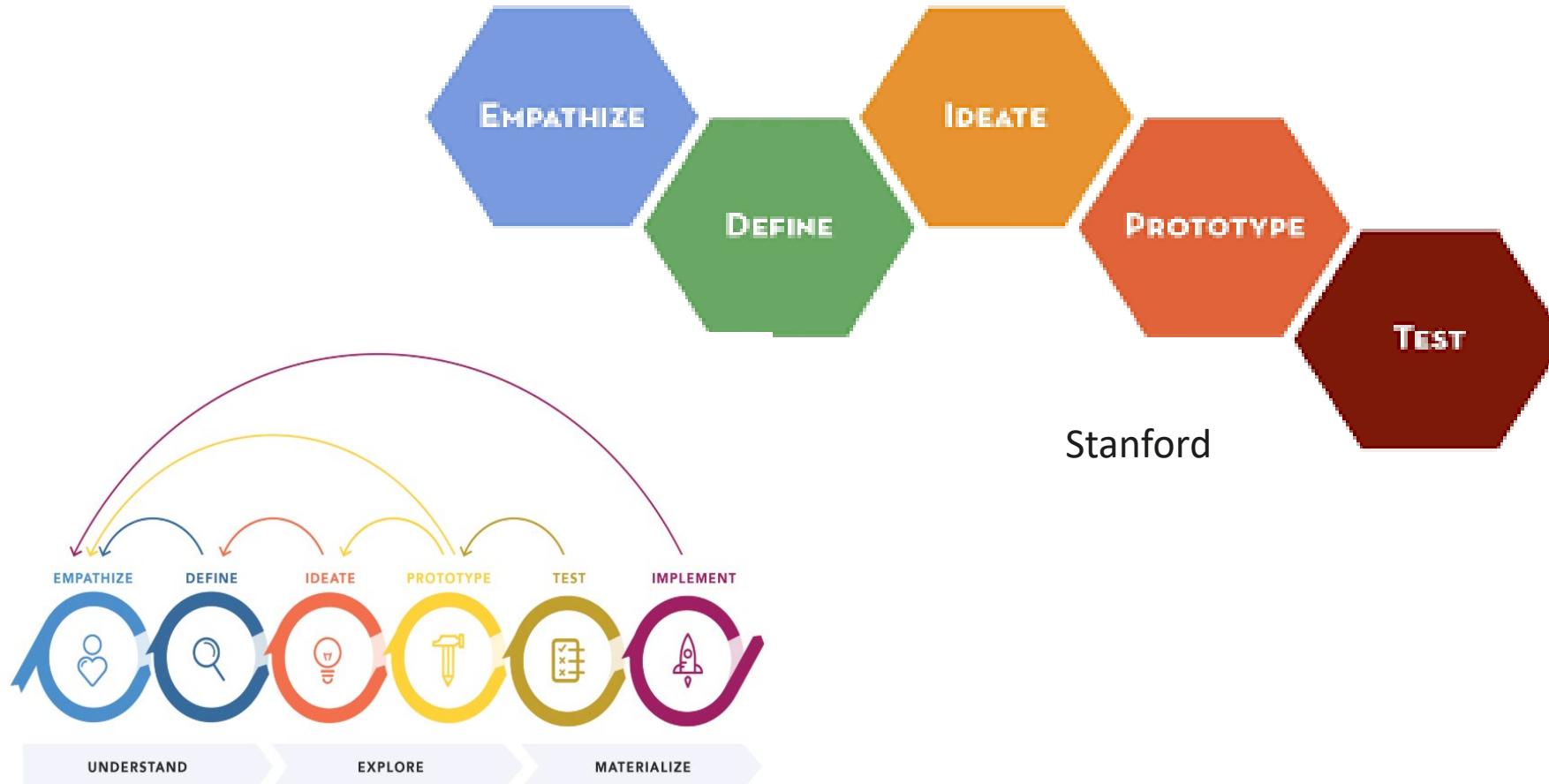
Convergeren en divergeren



Dit is niet wat we willen!



DESIGN THINKING PROCES



DESIGN THINKING WAARDEVOLLE PRINCIPES

WICKED PROBLEMS

Oplossingsrichting niet bekend
Omgaan met onzekerheden
Creative confidence

HUMAN CENTERED

Inleven in, begrijpen van
Actief betrekken van
Waarde creëren voor

DIVERGEREN / CONVERGEREN

Concreet – Abstract
Analyse – Synthese
Mogelijkheden – Focus

ITERATIEF

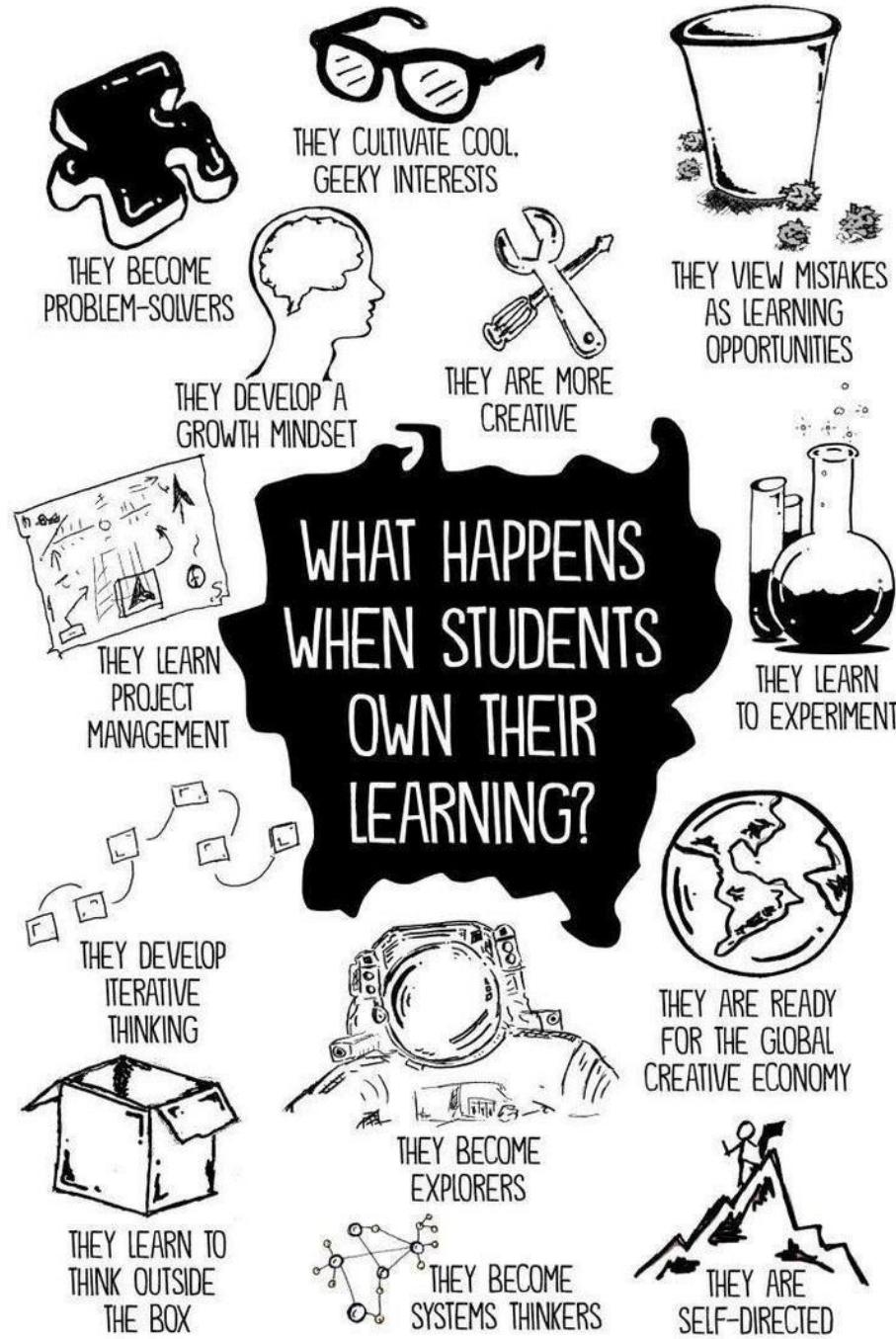
Herhalen stappen / proces
Snel fouten maken
Leren door te doen

DESIGNERS MINDSET

Nieuwsgierig en open
Lef om te experimenteren
Growth mindset

CO-CREEREN

Multidisciplinair
Benutten diversiteit
Resultaat van een teamproces



How might we design a minor for engineering towards sustainability

For students from different educational programs

That is future proof, challenging, multi-cultural,

So that students from all programs can learn from each other, and find solutions for sustainable problems such as:

- Climate change
- Hunger
- Sustainable tourism
- Waste
-
-

De wolken



Naam:

Rol:

Nationaliteit:

De zorgen?

Koud van?

Grenzen?

De Zon



De uitdagingen!

Warm van!

Mogelijkheden!



EERSTE HULP BIJ FALEN

