



STATE-OF-THE-ART
INTERNATIONAL
LEARNING
ENVIRONMENTS



LENE JENSBY LANGE, DIRECTOR, AUTENS



Autens is a leading Danish education consultancy, working globally.

Our mission is to co-create visionary, organisational & physical frameworks for meaningful learning journeys for learners of all ages, enabling each of us to create and live a life worth dreaming of.

WE PLAY. WE CO-CREATE.
WE IDEATE. WE INNOVATE.
WE DESIGN. WE FACILITATE.
WE LEARN. WE SHARE.
WE CONNECT. WE LAUGH.
WE LOVE IT!

EDUCATION INNOVATION CONSULTANTS



Future of Learning: Vision, Values & Strategy



Professional Development & Transformation

WINNER
THE DANISH SCHOOL ARCHITECTURE AWARD 2021



WINNER
THE DANISH SCHOOL ARCHITECTURE AWARD 2020

WINNER
WORLD ARCHITECTURE FESTIVAL AWARD WAF 2022

Plan and Design Schools



Design Learning Spaces

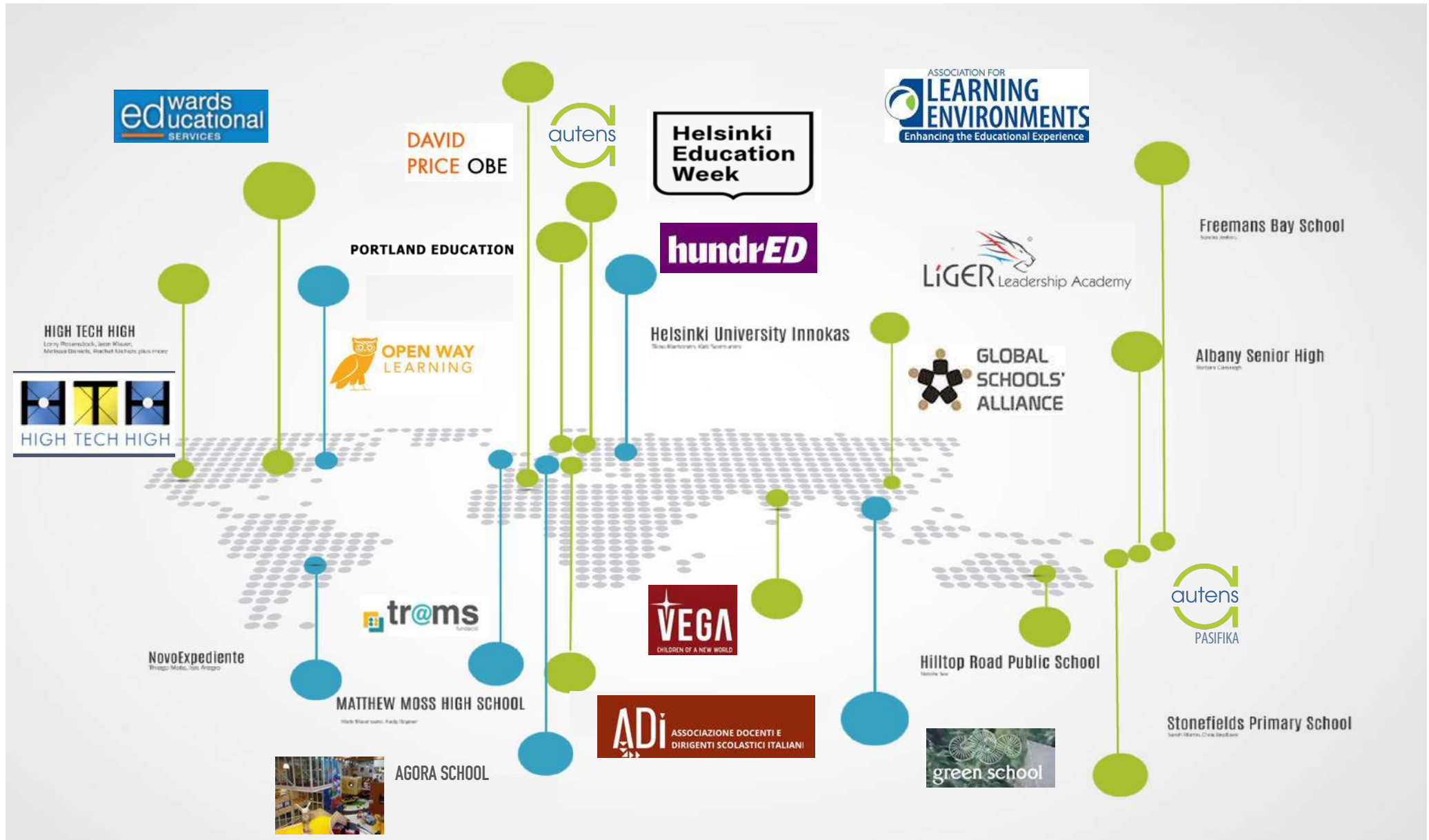
Winner of **hundredED** 2018 Innovation

We are a **hundredED** 2019 Innovation

Selected for **hundredED** 2018



AUTENS - GLOBALLY NETWORKED TEAM



WHAT IS A GREAT LEARNING ENVIRONMENT?

Cos'è un ottimo ambiente di apprendimento?



HERE'S A CLEAR TREND



Innovative learning environments (ILEs) are educational ecosystems that link space and technology with active learning approaches to develop 21st century skills and enhance students' engagement.

Gli ambienti di apprendimento innovativi (ILE) sono **ecosistemi** educativi che collegano lo spazio e la tecnologia con approcci di apprendimento attivo per sviluppare **competenze del 21° secolo** e migliorare il coinvolgimento degli studenti.

EUROPEAN COMMISSION

<https://school-education.ec.europa.eu/en/professional-development/courses/innovative-learning-environments-theory-practice>



An innovative learning environment is one that is capable of evolving and adapting to students and learning activities – and as educational practices evolve and change

Un ambiente di apprendimento innovativo è uno che è in grado di evolvere e adattarsi agli studenti e alle attività di apprendimento, mentre le pratiche educative evolvono e cambiano.



There are no innovative learning environments without innovative pedagogy

Non esistono ambienti di apprendimento innovativi senza pedagogia innovativa.



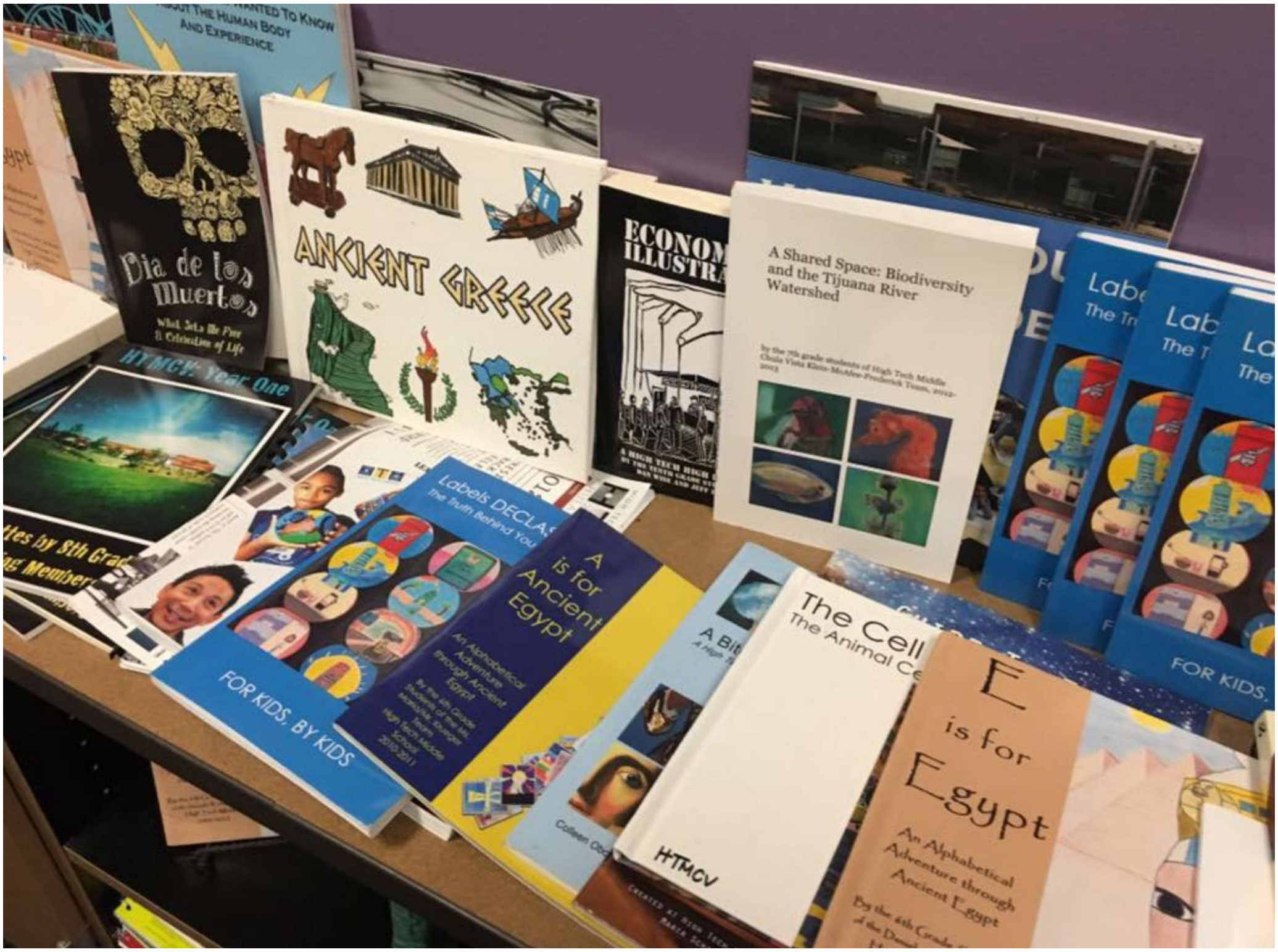
SO WHAT IS A GREAT SCHOOL TODAY?

Quindi, cos'è una grande scuola oggi?





Photo: High Tech High



...WANTED TO KNOW ABOUT THE HUMAN BODY AND EXPERIENCE

Dia de los Muertos
What Sets Me Free
is Celebration of Life

ANCIENT GREECE

ECONOM ILLUSTRATED

A Shared Space: Biodiversity and the Tijuana River Watershed
By the 7th grade students of High Tech Middle Chula Vista Eliza McAfee-Fredrick Team, 2012-2013

Labels DECLASSIFIED
The Truth Behind You

HTMCH: Year One

ites by 8th Grade
ng Member

A is for Ancient Egypt
An Alphabetical Adventure through Ancient Egypt
By the 6th Grade Students of the 6th Grade Homestead, Elanor High Tech Middle 2010-2011

The Cell
The Animal Cell

E is for Egypt
An Alphabetical Adventure through Ancient Egypt
By the 6th Grade

A Bit
A High Tech Middle

HTMCH
CREATED AT HIGH TECH MIDDLE



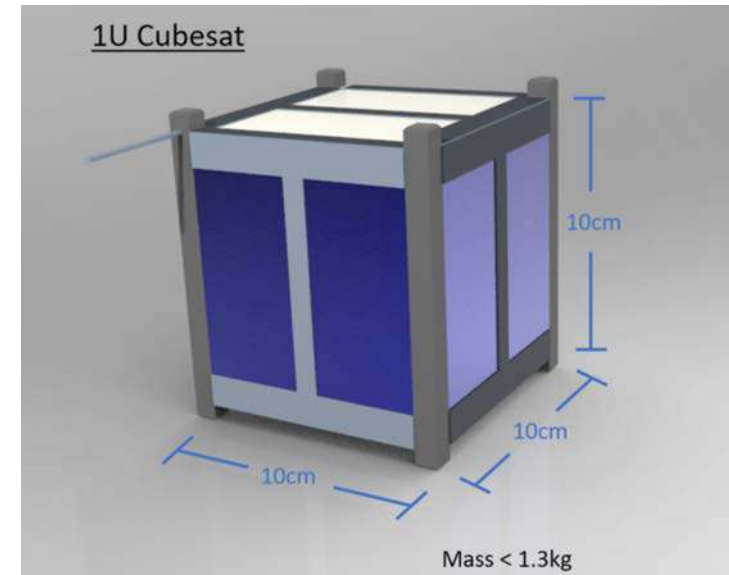
LIGERSAT — STUDENTS LAUNCHING A SATELLITE

 **Liger Leadership Academy Foundation** 22 hrs · 

Five of our senior students are launching the first Cambodian object into space! With the help of mentors with experience from Boeing, NASA, and CalPoly, these 16- and 17-year-olds aim to inspire and educate Cambodian youth about space with the launch of their nanosatellite, LigerSAT.

But they can't do it alone. For as little as \$5, your name could be heading to space onboard LigerSAT. Pledge to their Kickstarter today!

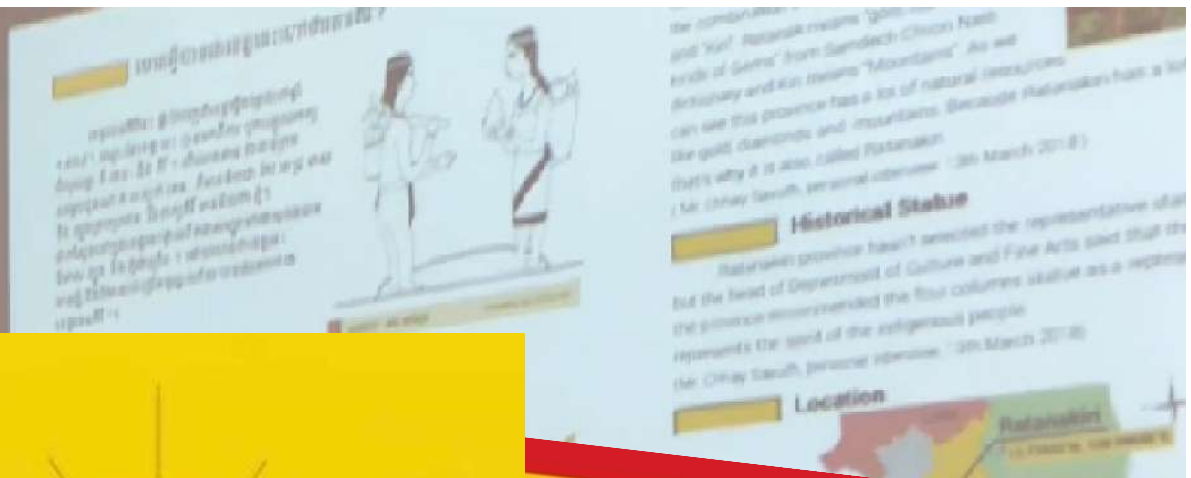
<https://www.kickstarter.com/.../cambodias-first-cubesat-educa...>



**WORKING WITH NASA AND BOEING
THEY BRING CAMBODIA INTO
SPACE!**

FIND THEM ON KICKSTARTER





108. The Total Brilliance of Liger Leadership Academy, with Jeff Holte
blubrory.com



Edited by កែសម្រួលដោយ
Eleanor Hart
Valentina DuBasky
An Art in a Box Project



- 
- The background of the slide features a large, dense crowd of people, likely at a public event or conference, with a semi-transparent globe overlaid in the center. The globe shows the continents of North and South America. The text is presented as a bulleted list in a bold, black font.
- **Fast-changing world**
 - **Lots of jobs disappear - and 65% of jobs for our 1st graders not created yet**
 - **Global challenges at an unprecedented scale**
 - **Endless ways to shape a valuable life**

THE HARD SKILLS OF THE 21st CENTURY

CREATIVITY

COLLABORATION

CRITICAL THINKING

COMMUNICATION



INTERACTING WITH THE PHYSICAL WORLD



THE NATURE OF LEARNING



A SOCIAL PROCESS

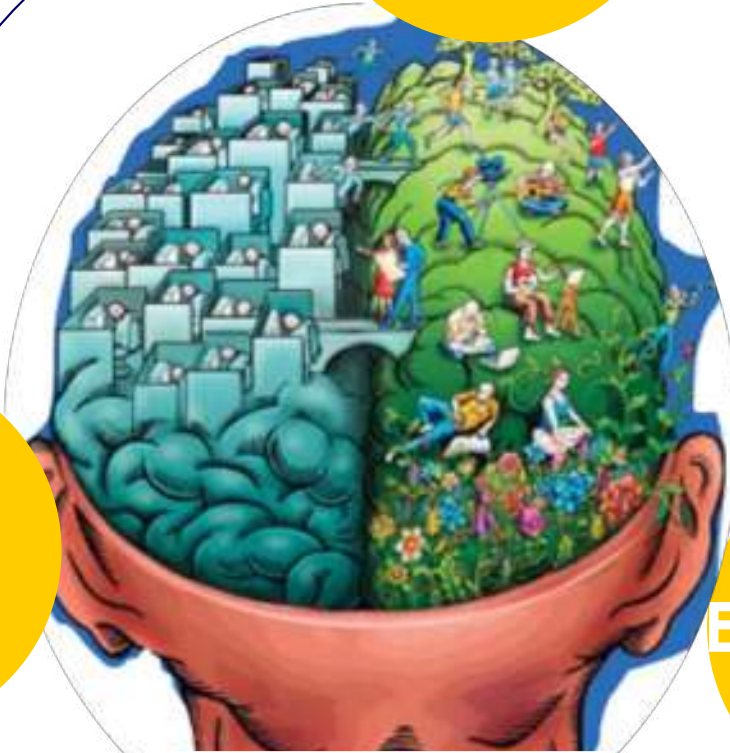
MEANINGFUL

JOYFUL

ENGAGING

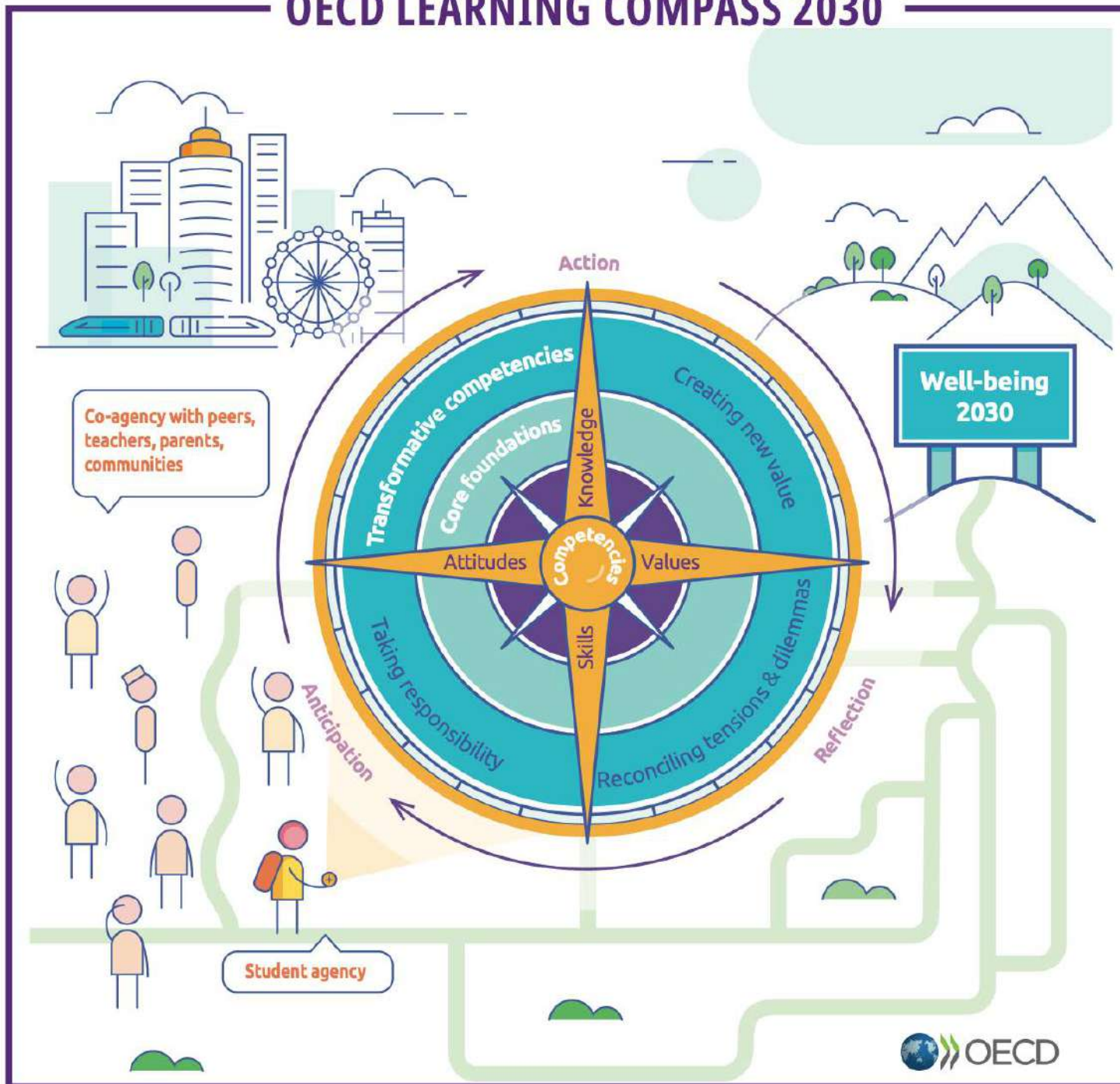
POSITIVE EMOTIONS & RELATIONS

ACTIVE & EXPERIMENTING



MANY WAYS OF LEARNING

OECD LEARNING COMPASS 2030



**We aim to educate compassionate
happy, curious changemakers,
creative innovators & responsible
global citizens,
able to lead healthy and
fulfilling lives of value**

**IL NOSTRO OBIETTIVO È EDUCARE INDIVIDUI COMPASSIONEVOLI, FELICI, CURIOSI E CAPACI
DI CAMBIARE, INNOVATORI CREATIVI E CITTADINI GLOBALI RESPONSABILI, IN GRADO DI
CONDURRE UNA VITA SANA E APPAGANTE DI VALORE.**



Let's look at numbers

In 4th grade 24% find school boring.
In 9th grade it's 42%.

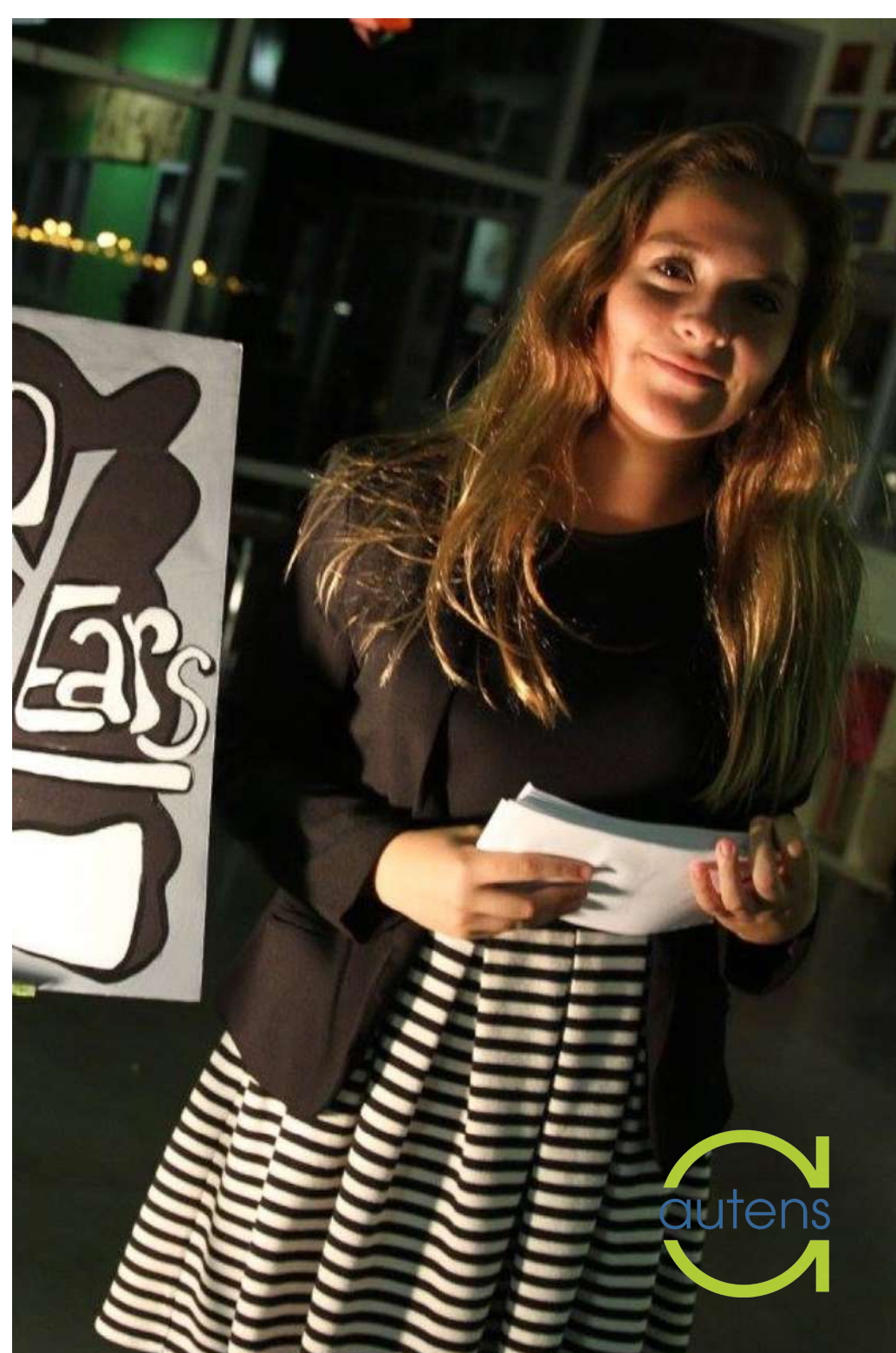
Kilde: Børne- og Undervisningsministeriets trivselsundersøgelse 2021/22



Let's look at numbers

In 4th grade 24% find school boring.
In 9th grade it's 42%.

**In 4th grade 30% of students feel
they lack support and inspiration.
In 9th grade it's 47%.**



Let's look at numbers

In 4th grade 24% find school boring.

In 9th grade it's 42%.

In 4th grade 30% of students feel they lack support and inspiration.

In 9th grade it's 47%.

Less than 50% of students in grade 4-9 say that school make them want to learn more.



Let's look at numbers

In 4th grade 24% find school boring.
In 9th grade it's 42%.

In 4th grade 30% of students feel
they lack support and inspiration.
In 9th grade it's 47%.

Less than 50% of students in grade
4-9 say that school make them
want to learn more.

**1 in 6 students never graduates
from youth education.**

Kilde: Børne- og Undervisningsministeriets trivselsundersøgelse 2021/22



Let's look at numbers

Udvikling i segregeringsgraden i folkeskolen, skoleåret 11/12-22/23 (%)



Note: Segregeringsgraden er opgjort pr. 1. november i skoleåret, undtagen i 11/12 hvor den er opgjort pr. 1. januar 2012

Kilde: Momentum. Egne beregninger på baggrund af FLIS

Exclusion rates from main stream school to special needs schools

Tassi di esclusione dalle scuole ordinarie verso le scuole per bisogni speciali.

IT'S STILL THE SCHOOL OF THE INDUSTRIAL AGE

- One-size-fits-all **It never did**

Una taglia unica - non va mai bene.



IT'S STILL THE SCHOOL OF THE INDUSTRIAL AGE

- One-size-fits-all **It never did**
- Everyone fighting to learn all the same things **even though they will take different paths in life**

- Tutti lottano per imparare le stesse cose anche se prenderanno strade diverse nella vita.



IT'S STILL THE SCHOOL OF THE INDUSTRIAL AGE

- One-size-fits-all **It never did**
- Everyone fighting to learn all the same things **even though they will take different paths in life**
- The day is divided into subjects **The world outside is not**

- La giornata è divisa per materie. Il mondo esterno non lo è.



IT'S STILL THE SCHOOL OF THE INDUSTRIAL AGE

- One-size-fits-all **It never did**
- Everyone fighting to learn all the same things **even though they will take different paths in life**
- The day is divided into subjects **The world outside is not**
- Everything is organized in the ratio of 1 adult to 25 students – and time slots of 45 minutes. **and not according to purpose.**
- Tutto è organizzato con un rapporto di 1 adulto ogni 25 studenti e intervalli di tempo di 45 minuti, e non in base allo scopo.



IT'S STILL THE SCHOOL OF THE INDUSTRIAL AGE

- One-size-fits-all *It never did*
- Everyone fighting to learn all the same things *even though they will take different paths in life*
- The day is divided into subjects *The world outside is not*
- Everything is organized in the ratio of 1 adult to 25 students – and time slots of 45 minutes. *and not according to purpose.*
- A good student is quiet, listening, complying *where the successful professional is creative, entrepreneurial and challenges status quo*
- Un bravo studente è tranquillo, ascolta e si conforma, mentre un professionista di successo è creativo, imprenditoriale e sfida lo status quo.



WE FACE A VERY REAL NEED TO RETHINK OUR SCHOOLS

Affrontiamo un bisogno molto reale di
ripensare alle nostre scuole.



10 WAYS TO REIMAGINE EDUCATION

1. RELATIONSHIPS AND WELL-BEING
2. PASSION, PLAY & 21ST CENTURY SKILLS
3. PROJECT-BASED LEARNING AND OTHER ACTIVE LEARNING FORMATS
4. STUDENT AGENCY
5. MULTIPLE WAYS OF LEARNING
6. REWIRE BELIEFS AND STRUCTURES
7. VARIED LEARNING ENVIRONMENTS FOR ALL
8. THE WORLD IS YOUR CLASSROOM
9. PROFESSIONAL LEARNING COMMUNITIES
10. SCHOOL DESIGN FOR A NEW AGE

1. RELATIONSHIPS & WELL-BEING
Generous, caring communities where learners belong, contribute and are acknowledged for who they are

2. PASSION, PLAY & 21ST CENTURY SKILLS
Passions, play, creativity, community & movement woven into the learning journey

3. AUTHENTIC LEARNING
Purpose and motivation through hands-on projects with real-world connections

4. STUDENT AGENCY
Active learners as participants, co-teachers, learning providers, creators & entrepreneurs

5. MULTIPLE WAYS OF LEARNING
Collaborate, create, dive deep, move, study, discuss, play, build, explore, share, exhibit, launch...

6. REWIRE BELIEFS & STRUCTURES
From schedules to assessments and everything in-between to align with your vision for learning and specific needs of learners

7. INCLUSIVE, VARIED LEARNING ENVIRONMENTS FOR ALL
From classrooms and one-size-fits-all to

8. THE WORLD IS YOUR CLASSROOM
Your local community, nature, city spaces, cultural institutions & business life as your learning arena.

9. PROFESSIONAL LEARNING COMMUNITIES
From teachers working alone to

10. SCHOOL DESIGN FOR A NEW AGE
Designing school buildings to nurture human-centric learning cultures, 21st century competences & green living



THE LEARNING HOUSE

Designed for Projects



A PBL & STEM SCHOOL COLLABORATING WITH THE OUTSIDE WORLD

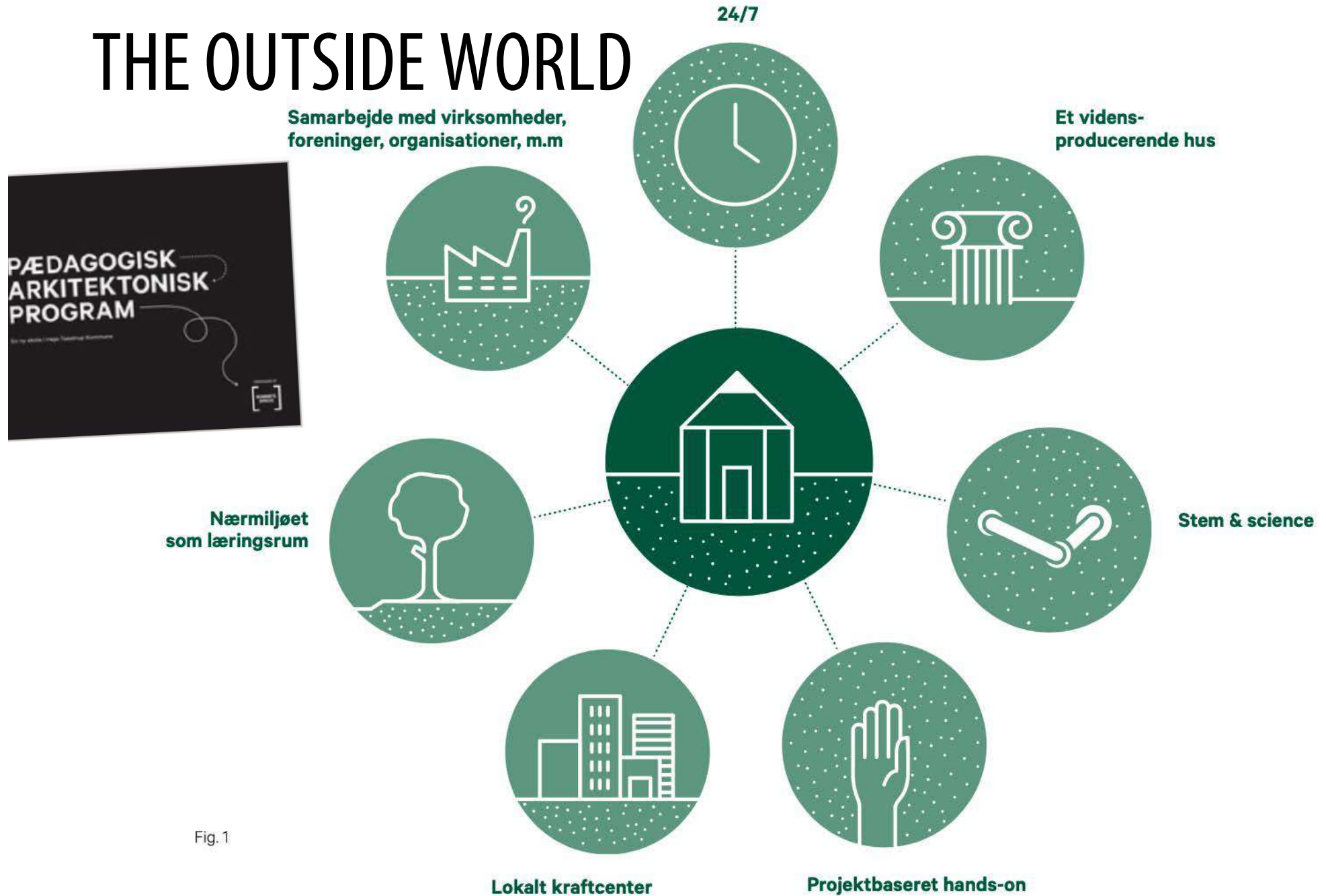
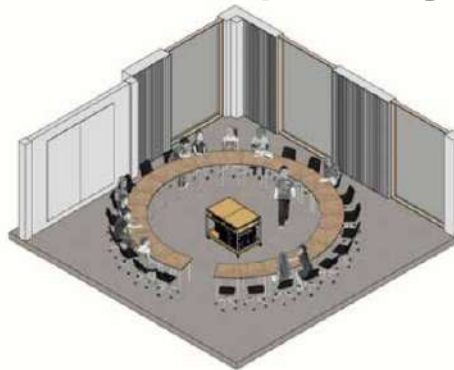


Fig. 1

BASER DESIGNED FOR VARIED ACTIVITIES



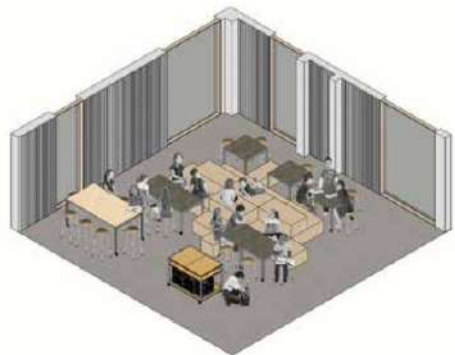
lille base indskoling, klassisk



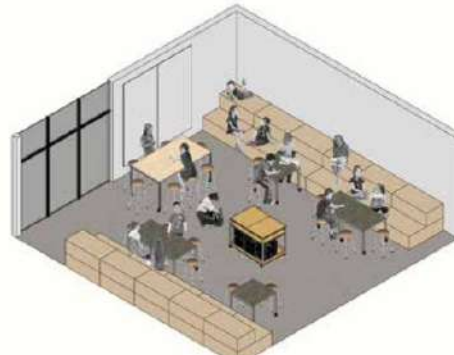
sokrates cirkel



ml trin / ud. skoling klassisk



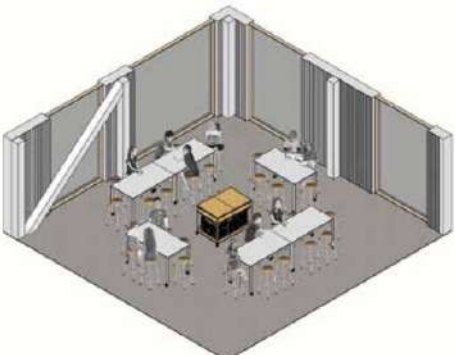
projektrum



projektrum



projektrum



workshoprum



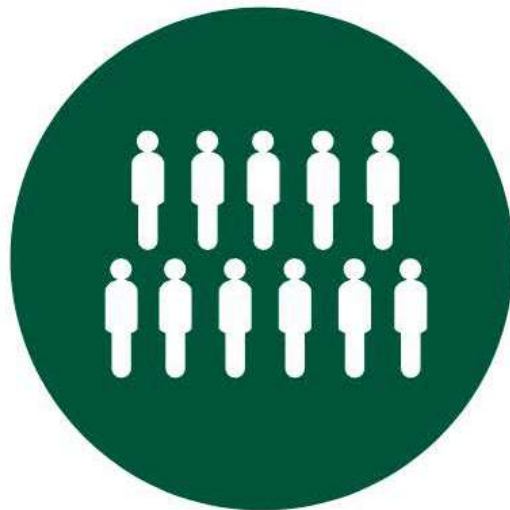
stor lille alt 1



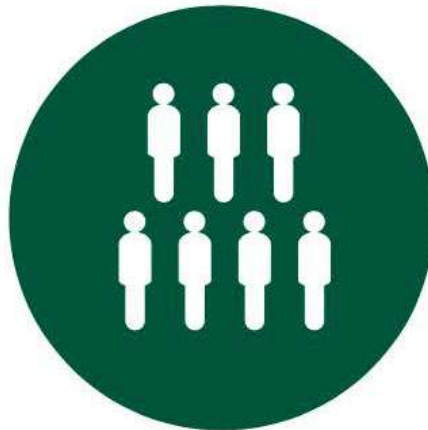
stor lille alt 2



DESIGNED FOR VARIOUS GROUP SIZES



Flok
70 - 300



Større gruppe (klasse)
20-50

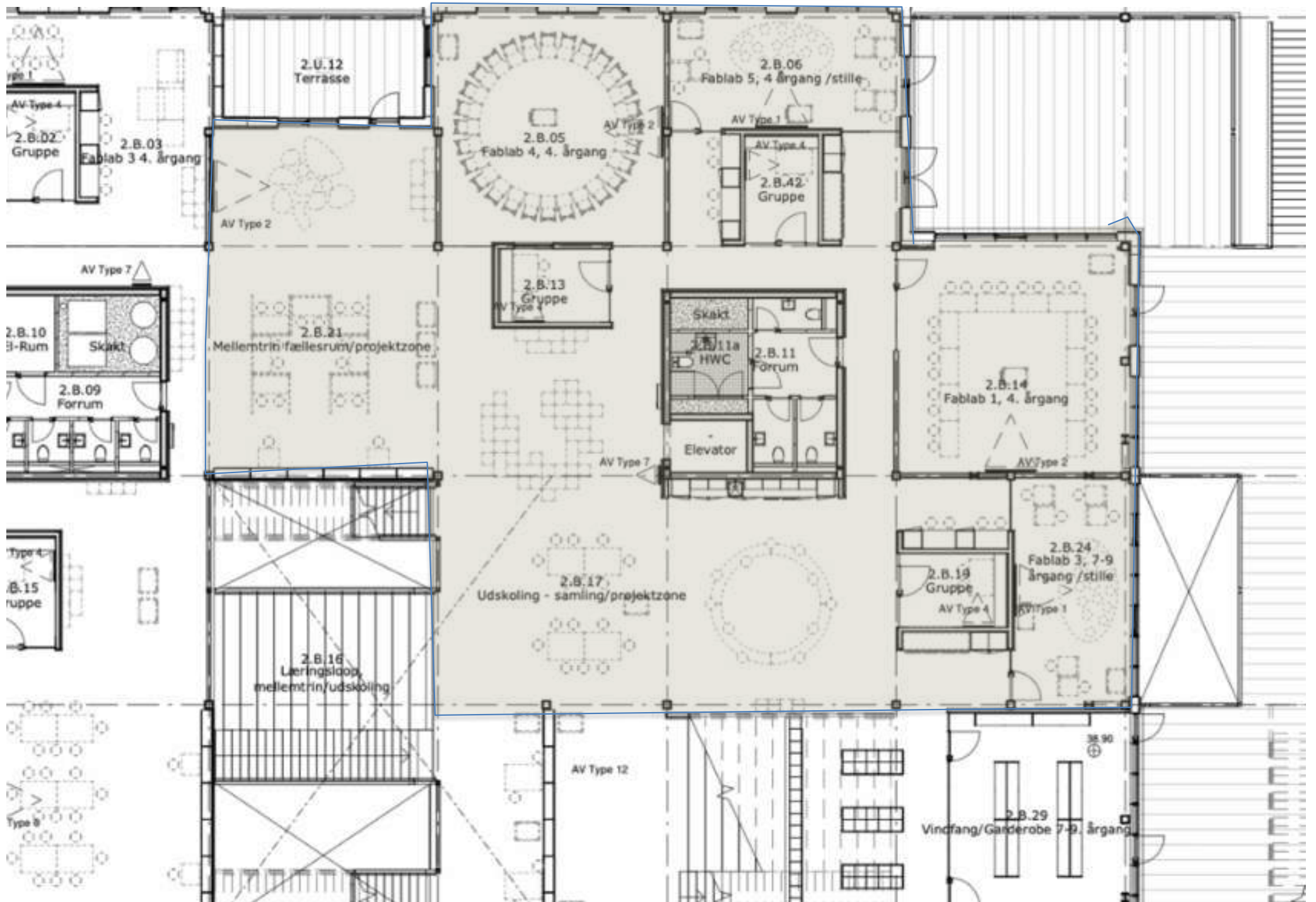


Mindre gruppe
4-10

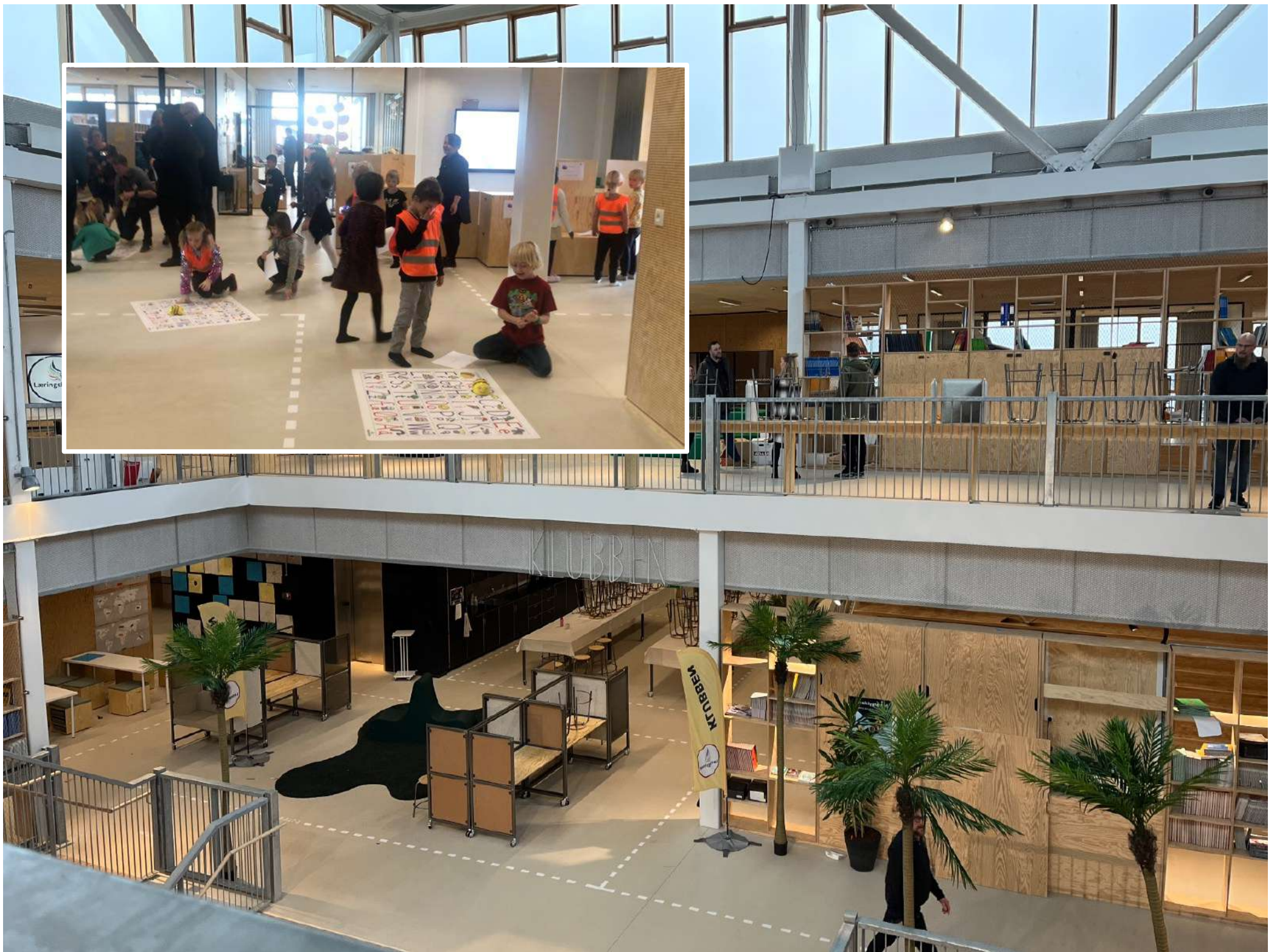


Individ
1-2









KLUBBEN

KLUBBEN



Schools that feel like nature



VRA SKOVSKOLE OG BORNEHUS

Schools that meets community needs



KINDERGARTEN



SPORT + MEETING FACILITIES



LIBRARY + CITIZEN SERVICES

BÖRNEHUS



SCHOOL
FACILITIES

SUND SCHOOL – FIRST ECO-LABELED SCHOOL

WORLD ARCHITECTURE FESTIVAL AWARD 2022



The new eco-labelled Sund School (DK) designed with Henning Larsen Architects

LINDBJERGSKOLEN: DANISH SCHOOL ARCHITECTURE AWARD 2020



LINDBJERGSKOLEN

WINNER
THE DANISH SCHOOL
ARCHITECTURE
AWARD
2020

SCHOOL
FACILITIES

Lindbjergskolen (DK) designed with Aarstiderne Architects. Winner of Danish School Award 2020.





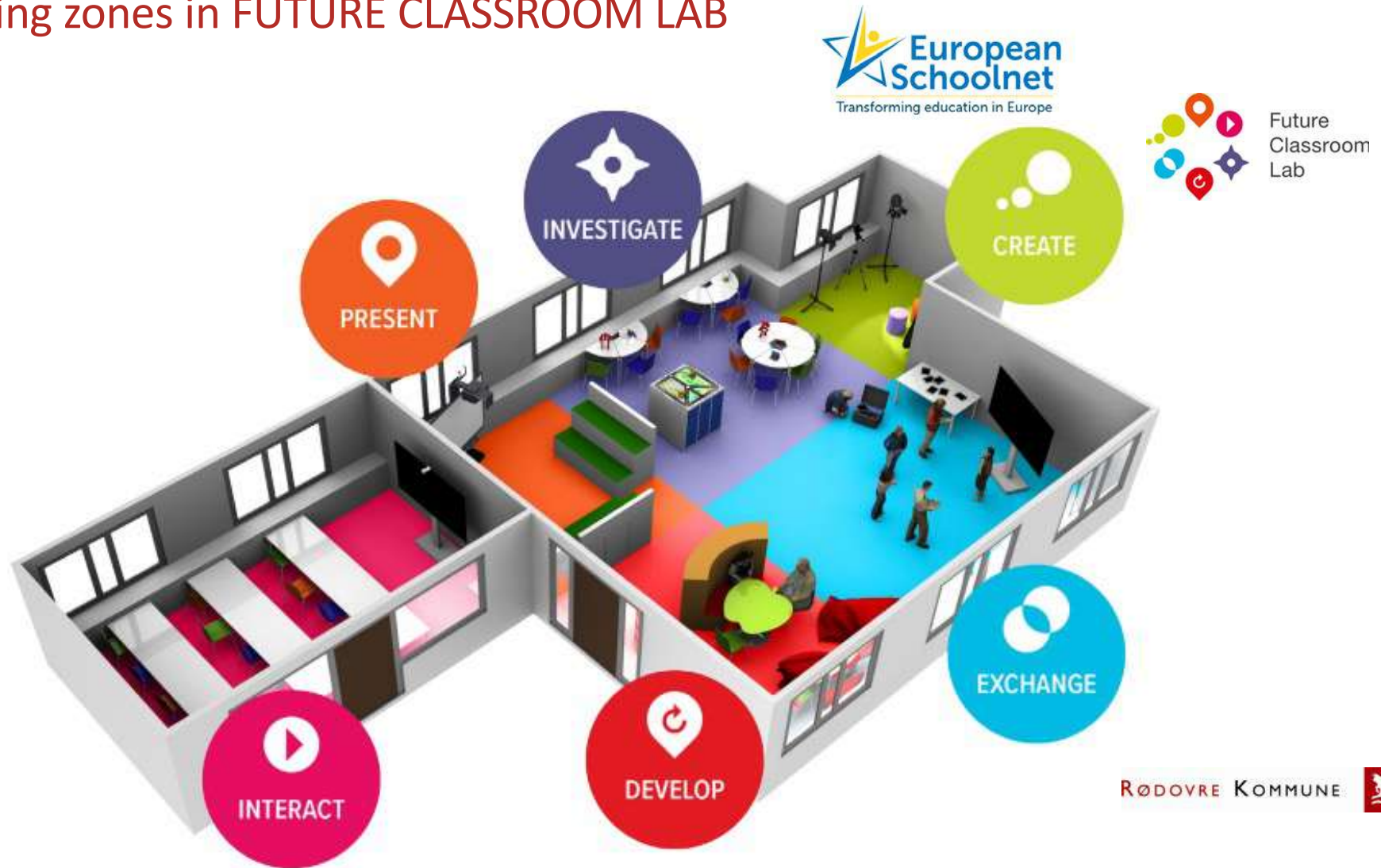
LINDBJERGSKOLEN



Lindbjergskolen (DK) designed with Aarstiderne Architects. Winner of Danish School Award 2020.

...AND YES MAKERSPACES...

Learning zones in FUTURE CLASSROOM LAB



RØDOVRE KOMMUNE 

AND PLAYLABS...







AGORA SCHOOL, ROERMOND: NO CLASSES, NO LESSONS



AGORA SCHOOL, ROERMOND



Visiting Agora Roermond, The Netherlands

ERLEV SCUOLA – OTHER THINGS TO THINK ABOUT















"NEW" SCHOOL IN EXISTING FACILITIES?

The case of Høsterkøb Skole - on a very low budget



A NEW SCHOOL IN AN EXISTING SCHOOL?



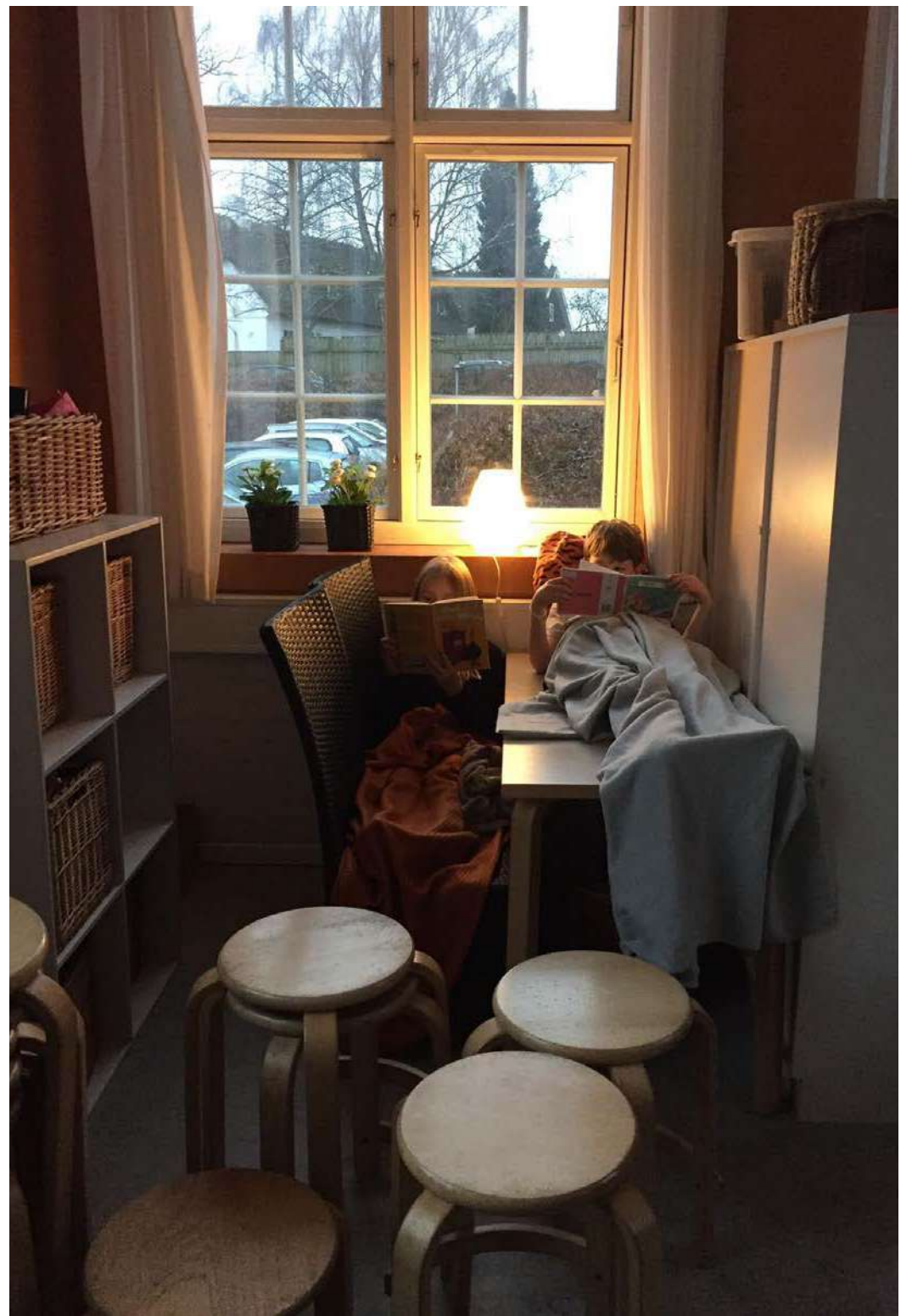




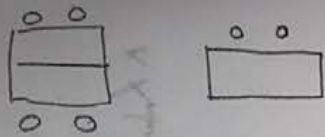






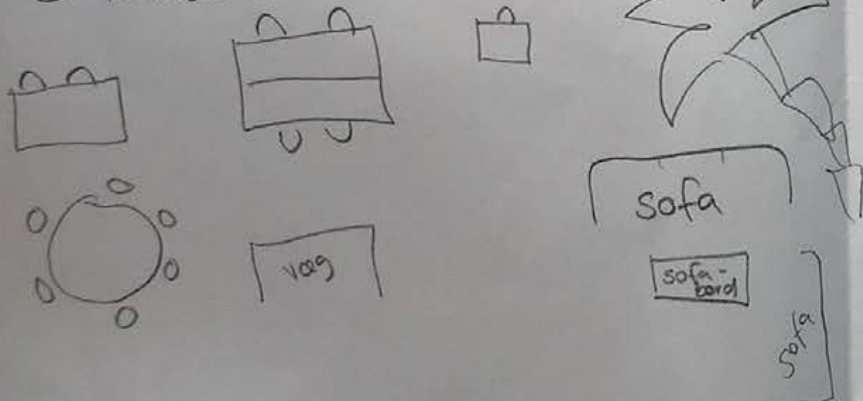


1. Klasse



- lærer styret / lærerne bestemmer
- hårdt og kedeligt at sidde hele dagen på samme plads
- hårdt at man skulle arbejde med ens siddepartner / man trængte til indflydelse
- Mange gik WC eller skulle spidse blyanter (Pause)

2-5 klasse



Lanestole
Plastic-stole

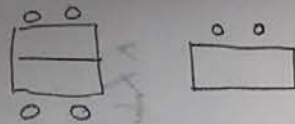
bestedzone / arbejdszone

- bestedzone
- Faste
- Fri

- Frihed
- Medbestemmelse - ^{indrettede} børnene
- Afveksling ^{tit rundt} til klassen og flyttede
- arbejde med mange forskellige
- ansvar - man måtte gerne bestemme meget selv
- skifte siddeplads og gå i sofa når man var træt
- Moderne, børnevenligt, hyggelig, hjemmeligt

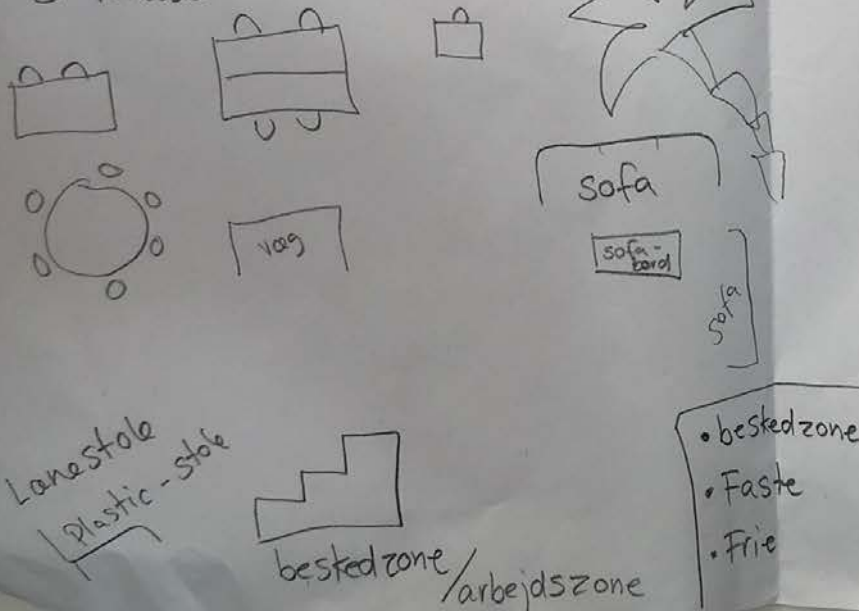
BEFORE THE CHANGE

1. Klasse



AFTER THE CHANGE

2-5 klasse

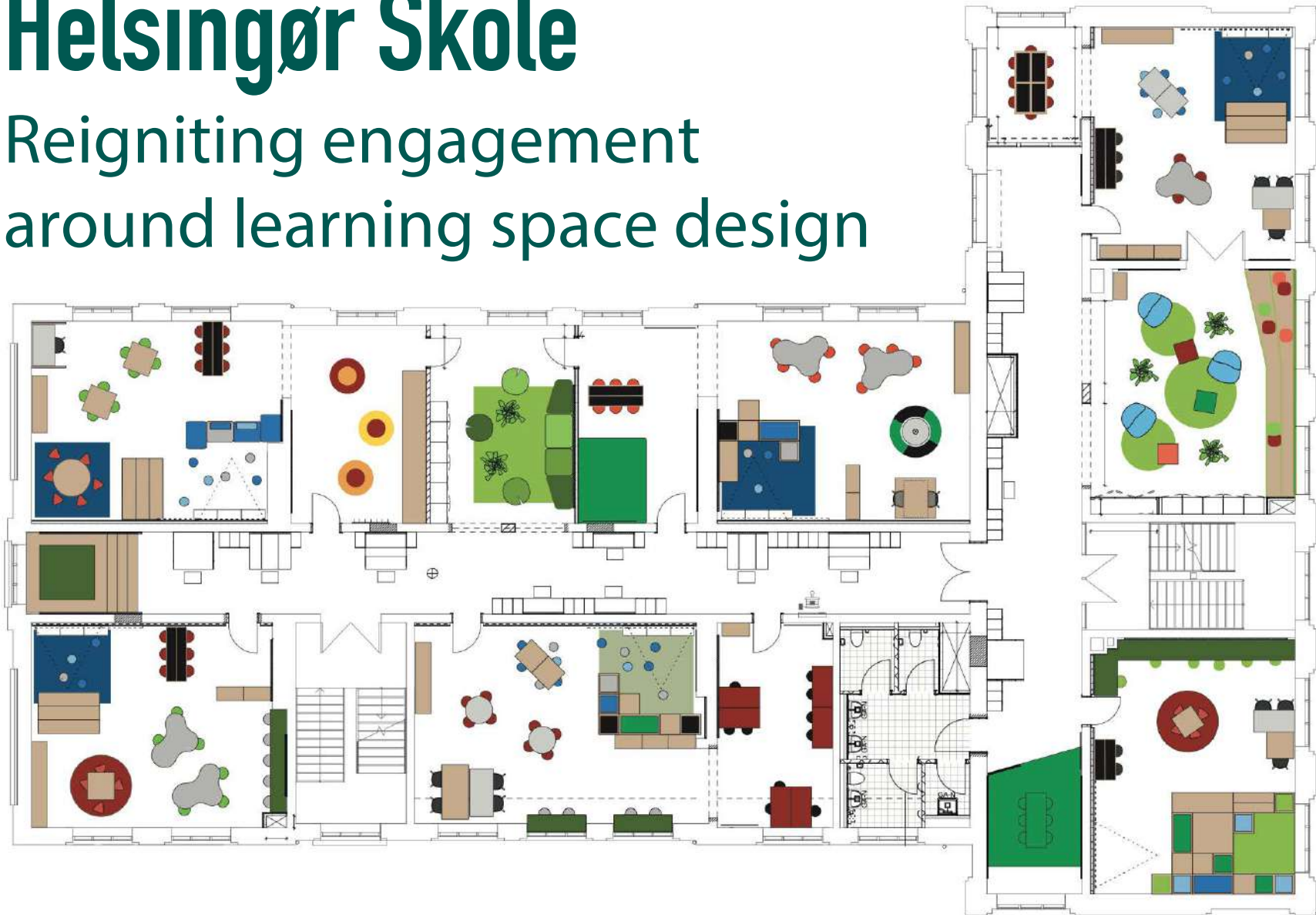


Teacher-led / lærerne bestemmer
Tough & boring sitting in the same seat all day
Tough to ALWAYS have to work with the same side-buddy
Lack of influence
... lots of 'I need to go to the bathroom', 'sharpen my pencils' excuses to take a short break

Freedom
Influence – we were involved in setting up the class and changing it every now and then
Working with different class mates
Responsibility – you could make own decisions
Able to change seats and go to the sofa if you were tired
Modern, child-friendly, cosy (hyggeligt), homely

Helsingør Skole

Reigniting engagement
around learning space design



DESIGN FOR BASIC PSYCHOLOGICAL NEEDS

SENSE OF
BELONGING

SENSE OF
AUTONOMY

SENSE OF
MASTERY OR
COMPETENCE

PROGETTARE PER I BISOGNI PSICOLOGICI DI BASE.

LEARN MORE: THEORY OF SELF-EFFICACY, BANDURA (1977) HARVARD.
POSITIVE PSYCHOLOGY, SELIGMAN, FREDRICKSON ET.AL.

Does learning space design matter?

Research and evidence


Yes, space matters!

Learning space design has a measurable impact on learning, well-being and student engagement

Il design degli spazi di apprendimento ha un impatto misurabile sull'apprendimento, sul benessere e sull'coinvolgimento degli studenti.


*Konklusion fra et omfattende, internationalt litteraturstudie (Byers et al., 2018a)



- 
- (Day)light and color
 - Access to nature, plants etc
 - The acoustic environment
 - Student ownership, personalization and flexibility in the classroom

account for 16 - 25 % of student progress in maths, reading and writing

(Barrett et al 2015, 2017) data from 3766 students
from 27 schools




An Australian study (Byers et al. 2018b) showed, that students in innovative learning environments were more engaged in their learning.

And the school day was characterized by

active learning, collaborative learning, creativity and personalized learning.

Gli studenti negli ambienti di apprendimento innovativi erano più coinvolti nel loro apprendimento. E la giornata scolastica era caratterizzata dall'apprendimento attivo, dall'apprendimento collaborativo, dalla creatività e dall'apprendimento personalizzato.



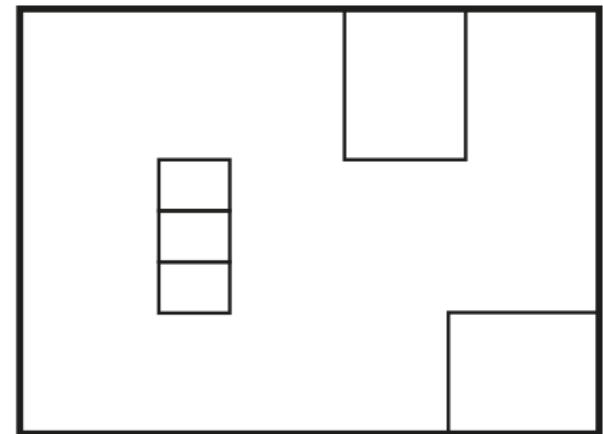
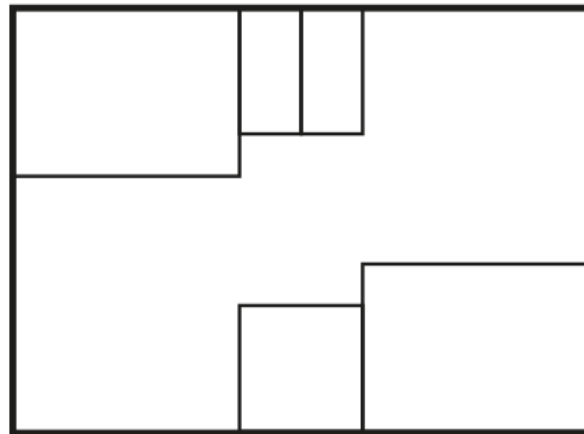
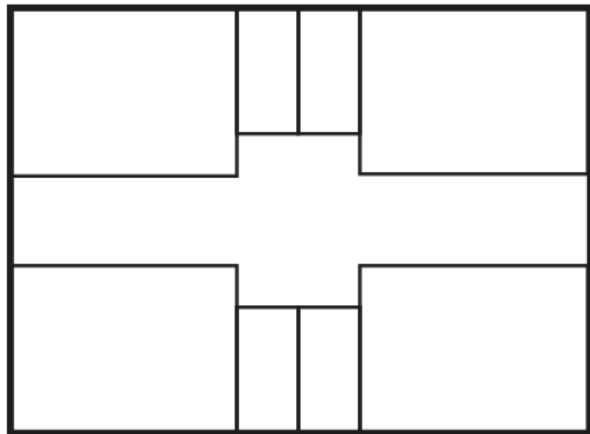
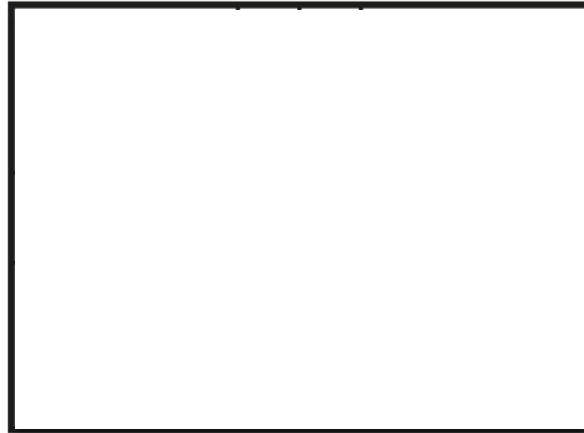
Teachers in innovative learning spaces are clearly more creative and varied in the way they approach teaching and learning

Gli insegnanti negli spazi di apprendimento innovativi sono chiaramente più creativi e diversificati nel modo in cui affrontano l'insegnamento e l'apprendimento.

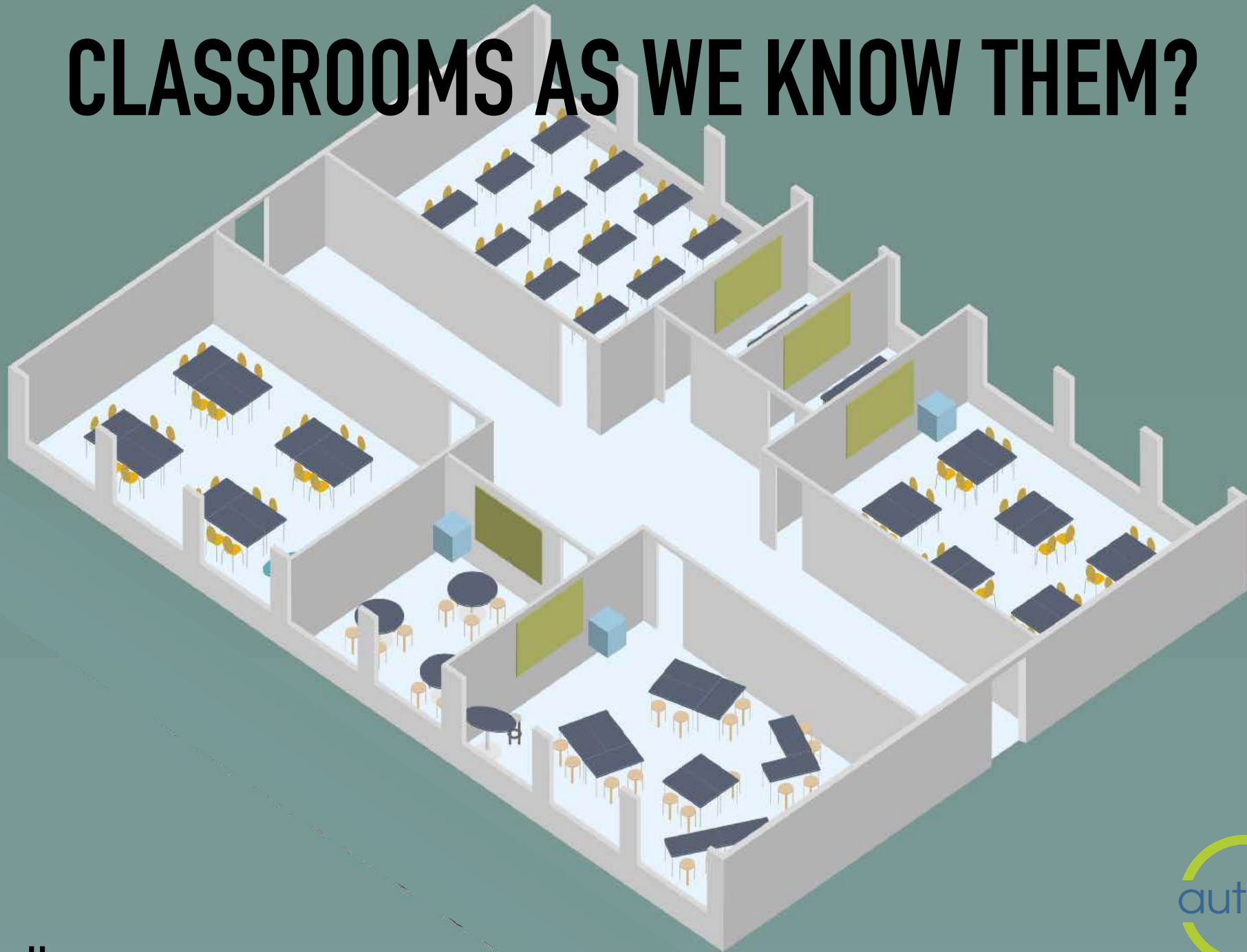
Byers, T., Imms, W., & Hartnell-Young, E. (2018). Comparative analysis of the impact of traditional versus innovative learning environment on student attitudes and learning outcomes. *Studies in Educational Evaluation*, 58, 167-177.



HAMBURGER KLASSENHAUS



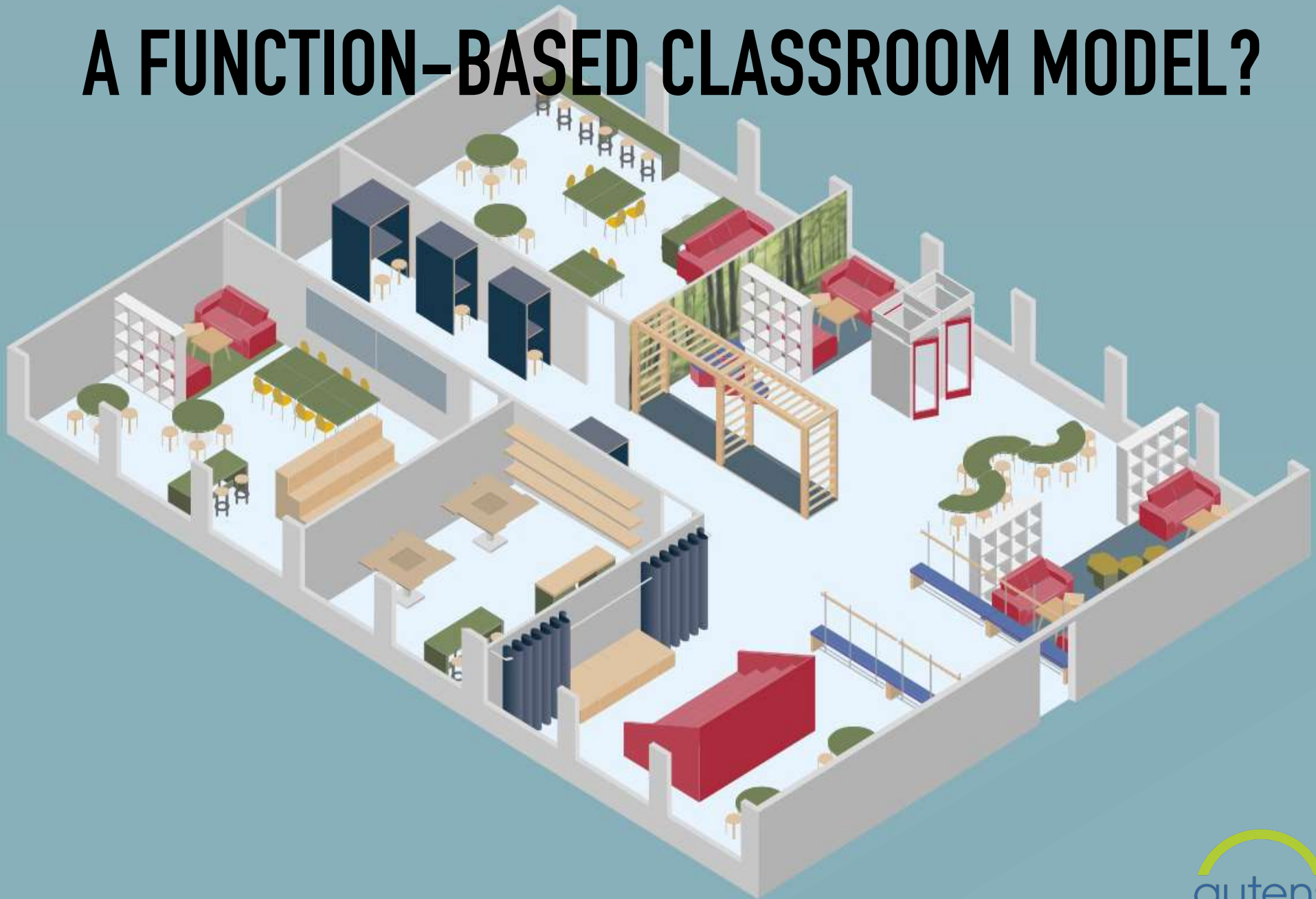
CLASSROOMS AS WE KNOW THEM?



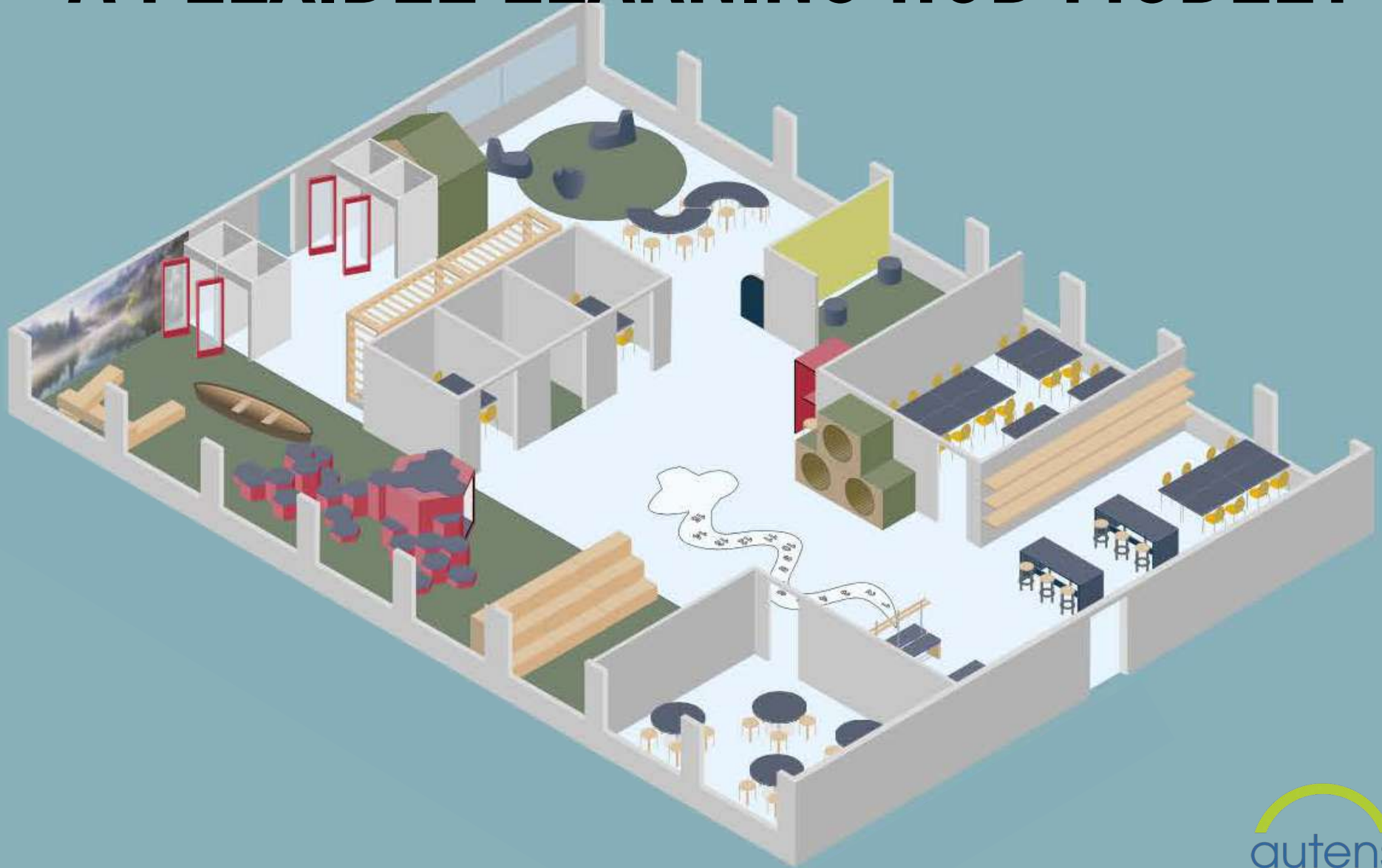
HAMBURGER KLASSENHAUS



A FUNCTION-BASED CLASSROOM MODEL?



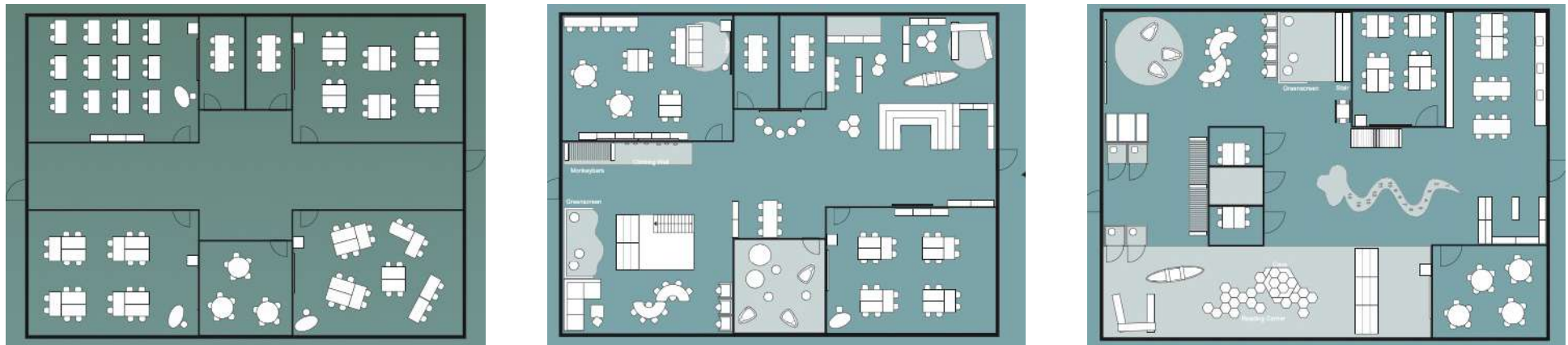
A FLEXIBLE LEARNING HUB MODEL?



HAMBURGER KLASSENHAUS

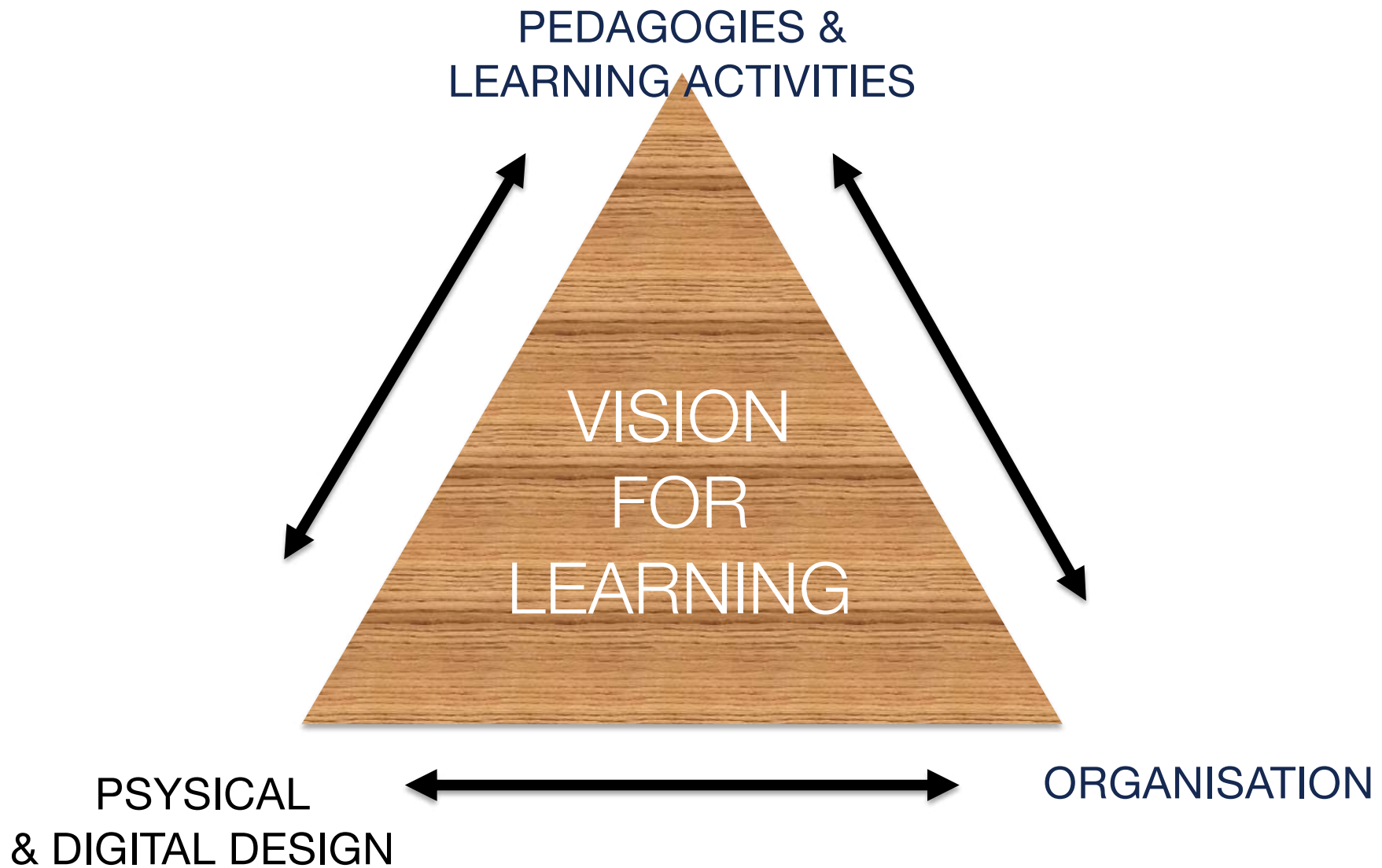


CONNECT THE VISION WITH THE DESIGN . . .

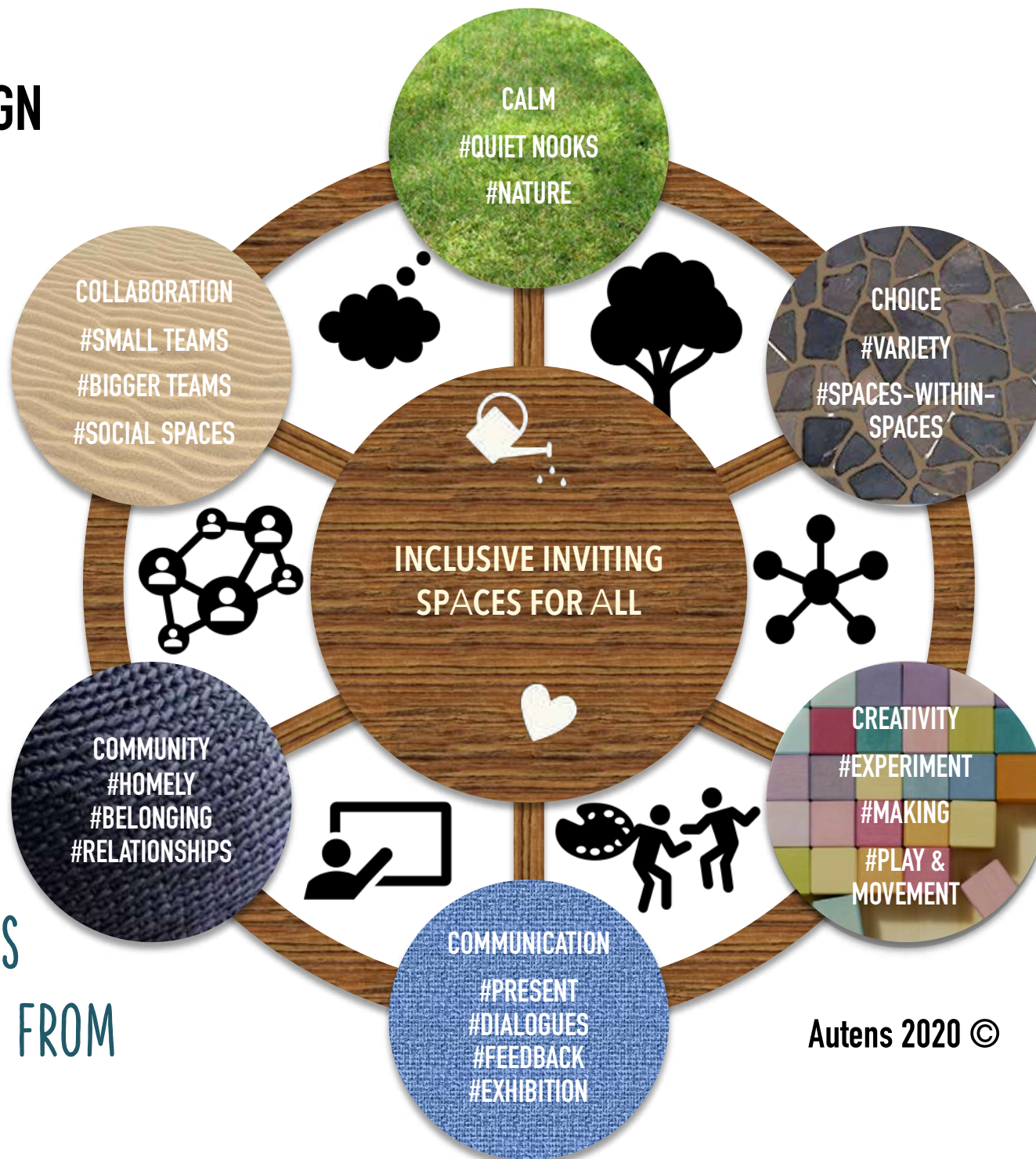


IN A WAY THAT IS USEFUL TO YOU

HELPFUL LEARNING ENVIRONMENTS



UNIVERSAL SCHOOL DESIGN PRINCIPLES



MORE THAN
3000 TEACHERS
AND STUDENTS FROM
+80 SCHOOLS

Autens 2020 ©





HAMBURGER KLASSENHAUS





THINK OF SPACES...

- AS AN INVISIBLE POWERFUL NARRATIVE

UN POTENTE NARRATORE INVISIBILE

- AS A PEDAGOGICAL TOOL FOR BOTH TEACHERS & LEARNERS

**UNO STRUMENTO PEDAGOGICO SIA PER GLI INSEGNANTI CHE
PER GLI STUDENTI**

- AS A VEHICLE FOR PEDAGOGICAL DEVELOPMENT

UN MEZZO PER LO SVILUPPO PEDAGOGICO.



Hellerup Skole
Design: Autens

Grazie per vostra attenzione

Il mio team ed io saremmo sempre felici di sentire da voi!

Lene Jensby Lange

lene@autens.dk +45 2070 5230

Website: www.autens.dk/english

