

Emilio Rossi

Inclusive Signs

**A card-based toolkit to generate creative
inclusive design concepts and research strategies**

Handbook • English Version 1.0

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Details

Inclusive Signs: A card-based toolkit to generate creative inclusive design concepts and research strategies **[Handbook • English Version 1.0]**

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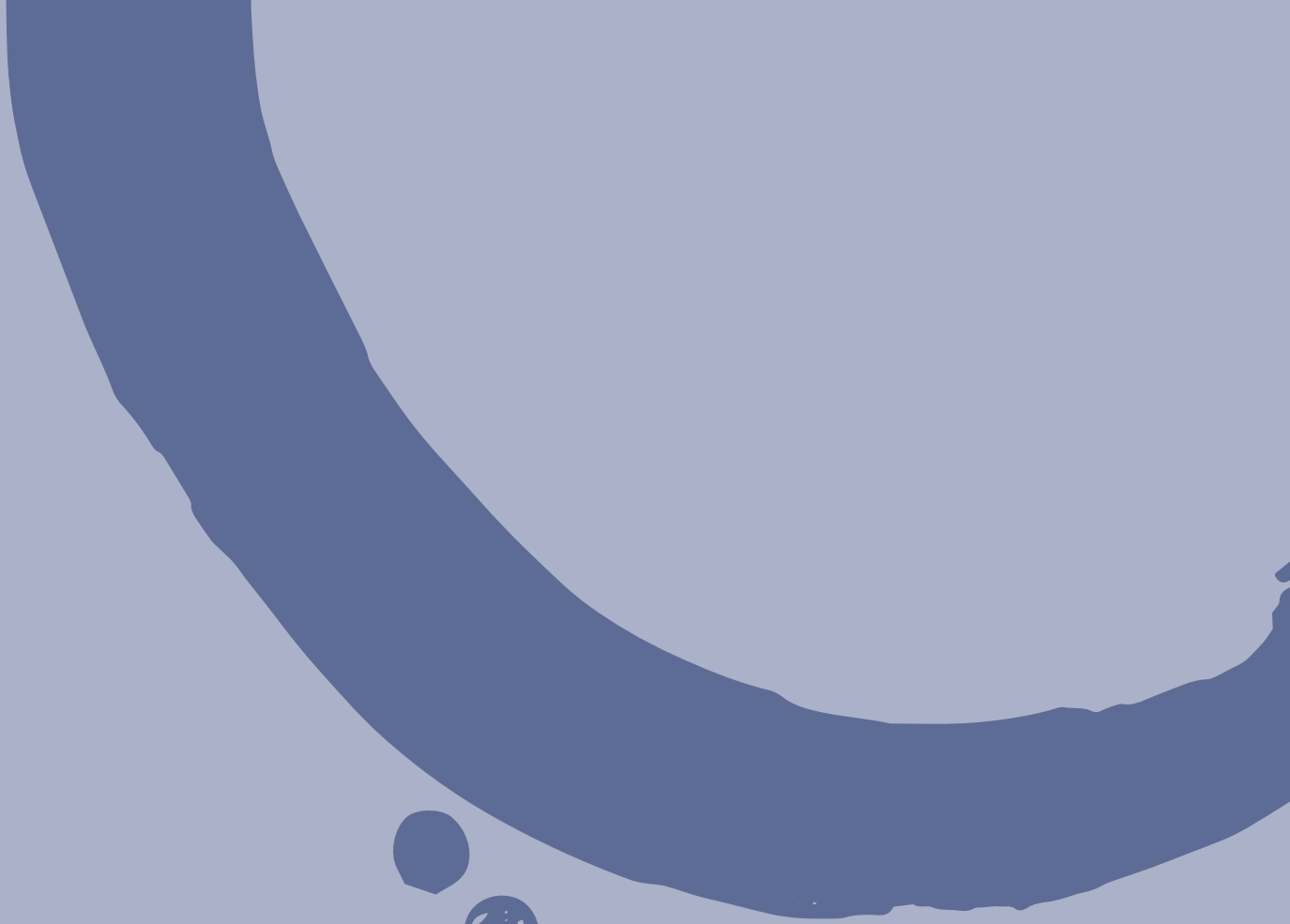
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64

100



Part 1

Research setting

Introduction

The understanding of signs is not a mere matter of recognition (of a stable equivalence); it is a matter of interpretation (Eco, 1984).

Signs, intended as visual stimuli, play an important role in people's everyday life, since human communication largely employs symbols to generate, or classify, narrations having a specific meaning. Trees, urban lights, tattoos, animal furs ... the world is full of signs.

In Semiotics – the study of signs and symbols – a sign is defined as the combination of visual and conceptual meanings: *signifier* and *signified* respectively. The signifier is the material form of something that can be perceived – i.e.: seen – whilst the signified represents the mental concept of what is perceived (Chandler, 2017). For instance, the picture of an airliner (signifier) can mean (signified) airplane, but also to flight, aviation, the future and vacations.

The study and the use of signs can be very useful in Design because, more and more often, designers are asked to create new artefacts (products, buildings, interfaces, services, etc.) containing *representational functions* to spread specific messages (Vihma, 1995) such as functions and values. Therefore, a *glossary of signs* can be generated through the creative combination of signifiers and signifieds. This generation is extremely important in the concept design stage (Verganti, 2009), when designers set the main project's trajectory; the stage when the main artefact's meanings are made explicit – innovation driven by meaning.

Visual signs can also be used in **Design for Social Inclusion**, which aims to create **enabling solutions**¹ that contrast the exclusion of some people from the economic, social, and political life of the society in which they live. Although human disability is one of the topics mostly considered, a Design for Social Inclusion approach goes further and solutions developed tackle important

¹ Solutions that enable people to get a result, rather than disabling them through inaccurate interpretation of their needs/wishes.

societal issues like social wellbeing, human abilities, disabilities, and rights; as well as human values, inequalities, and the value of individual (dis)abilities (Reed and Monk, 2006). Thus, the multidisciplinary complexity of such concept needs original design approaches able to stimulate creative reasoning (Braga, 2017).

This aspect is considered as crucial for the correct design of any enabling solution because designers often struggle when they want to create an inclusive artefact, which should go beyond the mere idea of accessibility, or being designed for disabled people. Designing enabling and inclusive solutions is therefore a matter of conception process, rather than execution. It should employ creative and focused insights, otherwise designers will continue to largely use biased concepts in their creative practice – i.e.: designing what is known, rather than what it may holistically work.



Figure 1. Inclusive Signs: Sample of cards.

Designing **inclusive signs** – inclusive concepts – can give the opportunity to generate original meta-design insights by creatively combining thematic signifieds belonging to Social Inclusion, and evocative visual signifiers able to stimulate creativity, reflections, and divergent thinking.

This handbook presents the **Inclusive Signs** (Figure 1), a card-based toolkit to generate creative inclusive design concepts and strategies. Inclusive Signs is a set of 180 cards (two different families of cards) and a worksheet that can be used to run creative brainstorming, workshops, discussions, as well as to find inspirational trajectories and meaningful values. The creation of inclusive signs is operated through free and instinctive combination of descriptive and visual concepts.

The first part of this handbook provides useful but concise information on the toolkit and its use. The second part contains the 180 cards and the worksheet. Early results are also presented.

Whilst this toolkit has been designed at the University of Lincoln to be a teaching and learning toolkit for design programmes, it aspires to be a useful solution usable by designers and a wider audience to generate controlled design ideas and meaningful visions for a future inclusive society. The goal is to stimulate deep reflections on using Social Inclusion as a learning ground through which to improve, holistically, all design processes.



An innovative approach to generate inclusive concepts

Knowledge makes everything simpler (Maeda, 2006).

The Inclusive Signs employs **semiotic patterns** to produce meaningful inclusive-oriented design meanings – *signs* – useful to guide the meta-design process in the development of enabling ideas, concepts and design strategies that are compliant with the idea of Social Inclusion. Therefore, the toolkit can be considered as a resource to work with the Design for Social Inclusion.

This innovative approach allows designers and stakeholders **to frame new meta-design concepts through instinctive combination of descriptive and visual meanings.**

The use of Semiotics is paramount if related to the conceptual design stage (Davis and Hunt, 2017), as the development of inclusive solutions requires the use of unbiased design thinking, fostering the innovative design of solutions that are consistent with the Social Inclusion concept. Therefore, the toolkit promotes the overcoming of limiting concepts only linked to, for instance, design for disability, design to accessibility, etc. Instead, it promotes wider reasonings and explorations of central concepts belonging to Social Inclusion, spanning social relations to futures opportunities, gender and race to societal assets. Accordingly, the toolkit is considered a valuable tool to produce radically new concepts to be used for the design of original artefacts. In this sense, this toolkit supports the idea of **meaning-driven inclusive innovation.**

The toolkit allows the linking of 60 keywords relating to Social Inclusion to 120 evocative images to stimulate the reasoning and the creative development of new meanings. In relation to Semiotics, keywords refer to signified (i.e.: what is the concept of Social Inclusion that the project must address), whilst images comprise the signifier of the new concept to be developed (i.e.: how this idea can be creatively implemented, achieved, etc.) (Figure 2).

The sole rule to follow for the correct generation of inclusive signs is: **one descriptive concept must be linked with at least one visual concept. Or vice versa.**



Figure 2. Combination of concepts.

The card-based toolkit

The use of card-based toolkits in Design is not new and provides designers and stakeholders a valid low-cost resource to be used in

many co-design processes. According to Roy and Warren (2019), card-based toolkits are semi-structured tools that facilitate the creative combinations of information and ideas. Notable examples have been made by IDEO (IDEO, 2003), Dan Lockton (Lockton et al., 2010; Lockton et al. 2019), Ræbild, and Hasling (2018), and IDEAN (2020).

As anticipated, Inclusive Signs is composed by two families of cards – **descriptive cards** and **visual cards** – and a **worksheet**.

The set of 60 descriptive cards contains a selection of the most recurrent keywords relating to Social Inclusion (Figure 3). Cards are clustered in three sub-categories: (1) single keywords (e.g. *participation*), for concepts providing immediate understanding and cultural associations; (2) binominal keywords (e.g. *mixture and diversification*), for concepts that may benefit of association with other reinforcing ideas, so one can have an effect of the other; (3) multiple keywords (e.g. *gender / race / sexuality*), for interdisciplinary concepts providing wider understanding of complex issues, such as society, context, the future, etc.



Figure 3. Descriptive cards: Sub-categories.

The set of 120 visual cards aims to stimulate creativity, deep reflection, emotional connections, and lateral/divergent thinking (Figure 4). This is done by producing a kind of visual reaction in the toolkit’s user. Images are both positive and negative; human and animal scenes are also included; figurative and abstract representations equilibrate the information provided.

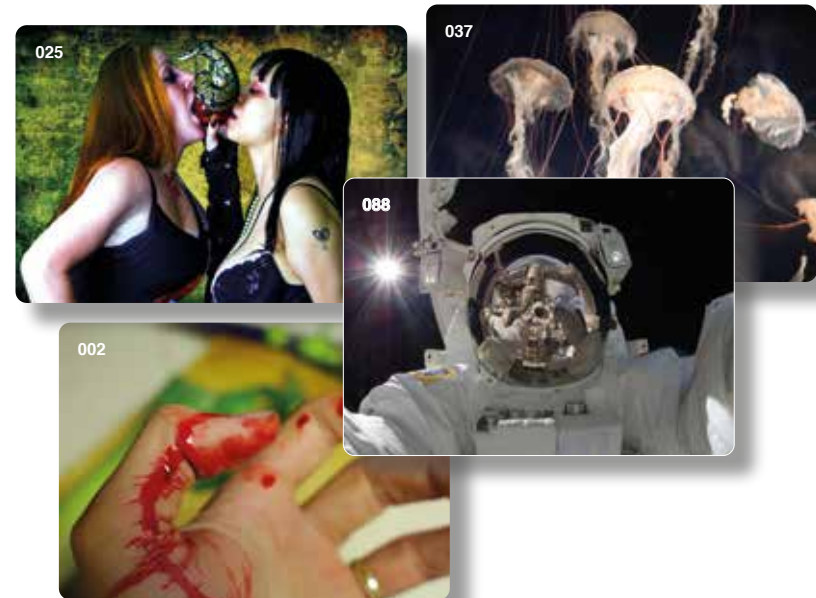


Figure 4. Visual cards.

Finally, the worksheet has been designed to help designers and stakeholders to systematize the information that can be generated in the creative process of inclusive signs generation (Figure 5). This resource allows both providing textual insights (i.e.: textual notes and definitions) and sketches to rapidly portray the new inclusive concepts.

The format chosen for the cards is A6 (105 × 148 millimetres, landscape orientation). Therefore, they can be printed in just 45 A4 sheets. Conversely the worksheet format is A4 (210 x 297 millimetres, landscape orientation).

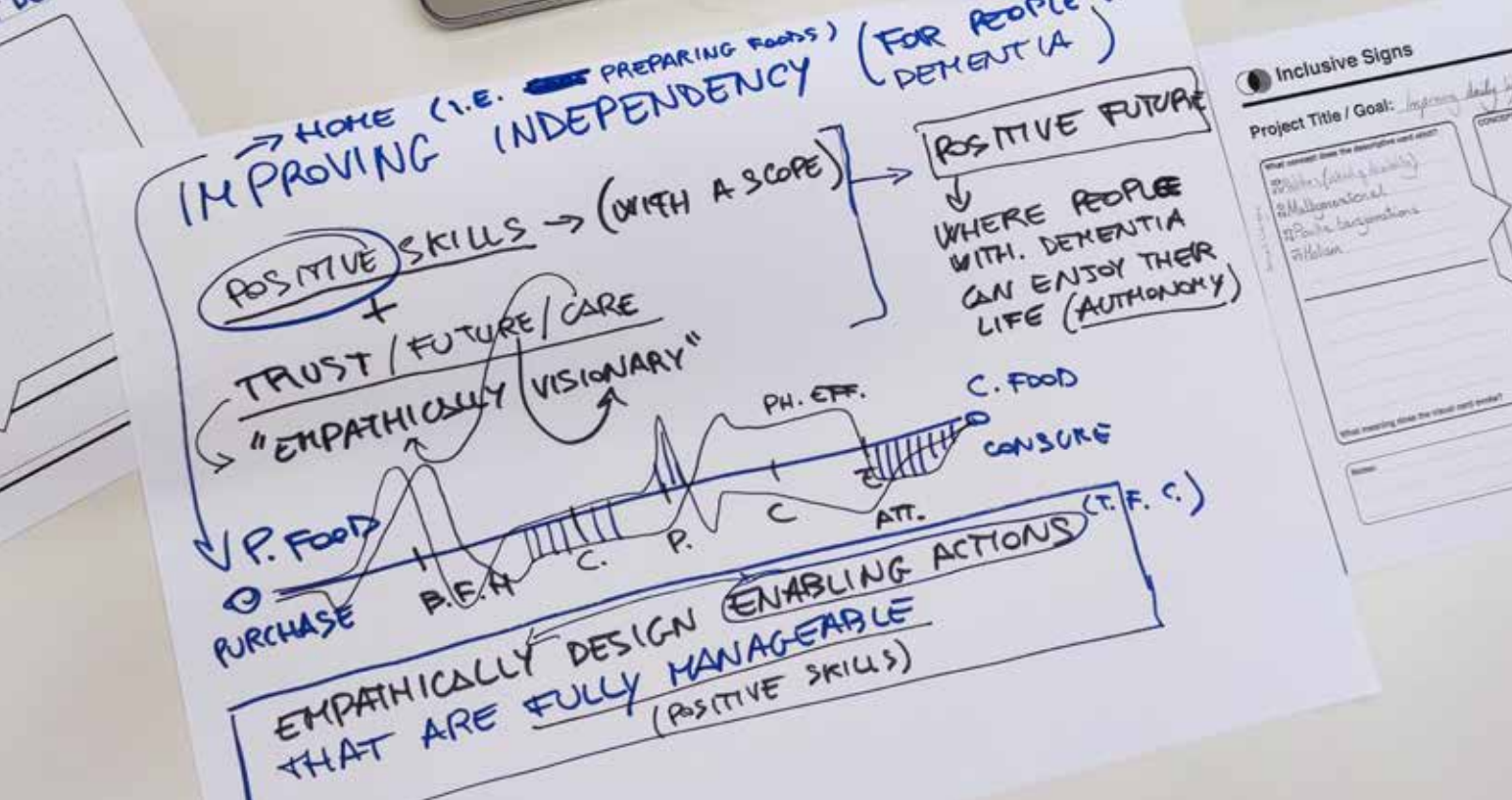


Figure 6. Meta-design insights generated through the Inclusive Signs toolkit.

WHEN

When to use the toolkit? Inclusive Signs can be used in the meta-design process of any new inclusive project. This means that the toolkit can provide useful guidance in all situations when an original strategy for the creation of new enabling solutions is needed. Furthermore, Inclusive Signs can be used to frame complex issues as well as providing ground-breaking advances and conceptual developments for future inclusive scenarios and projects.

HOW

How to generate inclusive signs? The generation of inclusive signs is made through free and instinctive combination of descriptive and visual concepts. For pre-identified domains, the toolkit can be

also intended as a flexible resource to create contextual insights. Therefore, the toolkit allows expansion of the *glossary* of design-oriented concepts to overcome biases and reductive clichés linked to Social Inclusion.

How is the process of inclusive signs generation guided? Inclusive Signs uses 180 cards and a worksheet to support designers and stakeholders in the generation of inclusive meta-design concepts. Alongside the creative combination of cards, the worksheet supports the process of synthesis and data extraction.

WHERE

Where to use the toolkit? Alone or in team, designers and stakeholders can use the toolkit in studios, offices, at home or during collective brainstorming sessions with a wider audience. Inclusive Signs is a flexible resource that can therefore produce limitless ideas, when needed, always, everywhere. The toolkit can be downloaded or used online through the project's website <https://inclusivesigns.lincoln.ac.uk/>.

WHO

Who can/should use the toolkit? Inclusive Signs is an *inclusive resource* and therefore allows everybody to creatively generate inclusive meta-design insights to be used for creating any enabling solution. Accordingly, Inclusive Signs is a toolkit primarily conceived for designers. However, stakeholders can intuitively use the toolkit to produce meta-design insights that later can be used by designers in participative design processes.

How to use the cards

This section of the handbook provides useful guidance and instructions on how to use Inclusive Signs and how to generate inclusive meta-design concepts.

Two modalities are discussed in this section to provide complete understanding on the use of the toolkit. In the first case (Figure 7), inclusive signs are produced from descriptive cards. In the second case (Figure 8), inclusive signs are created from visual cards.

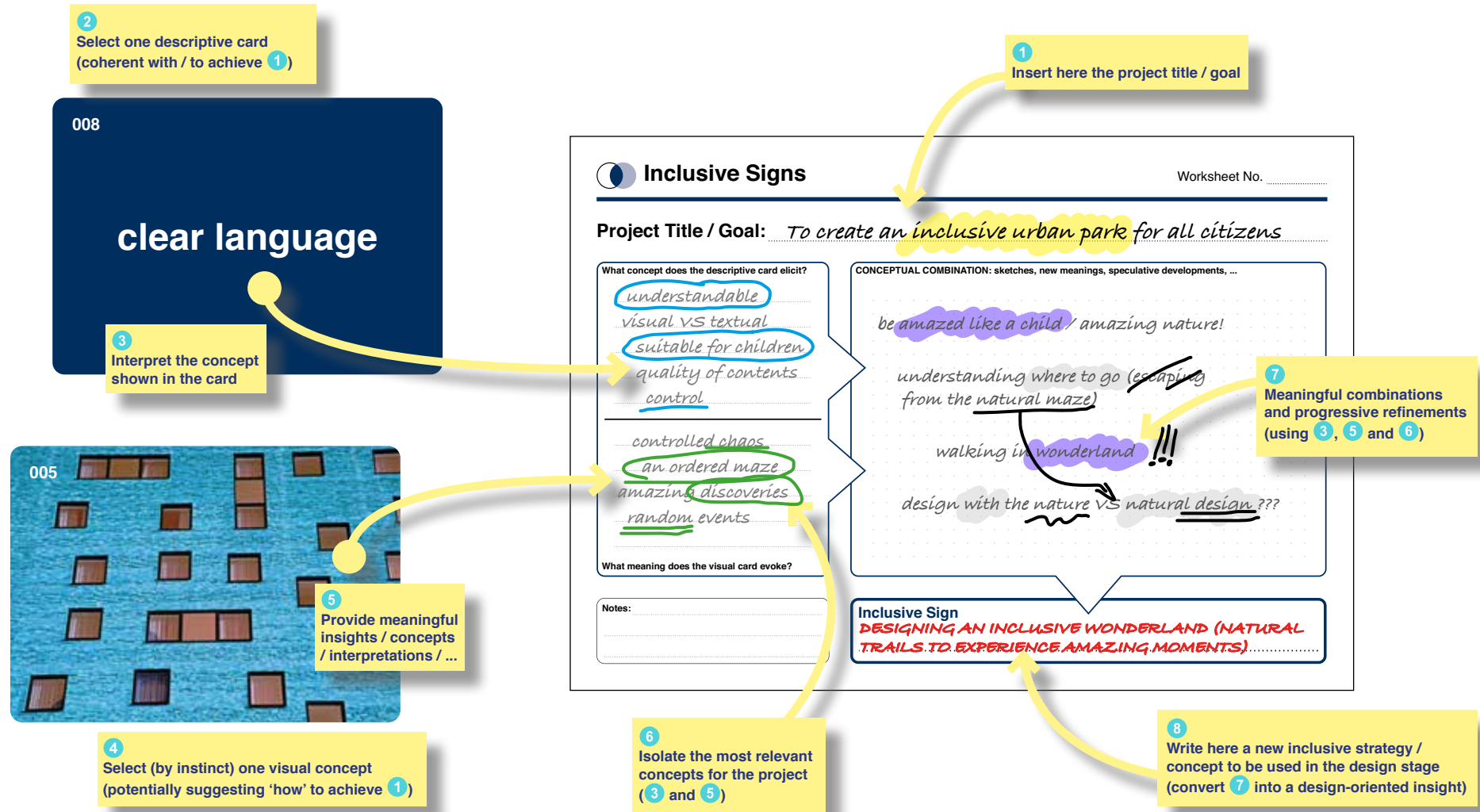


Figure 7. Inclusive Signs: Generation of an inclusive strategy from one of the concepts of Social Inclusion (descriptive cards) – From **1** to **7**.

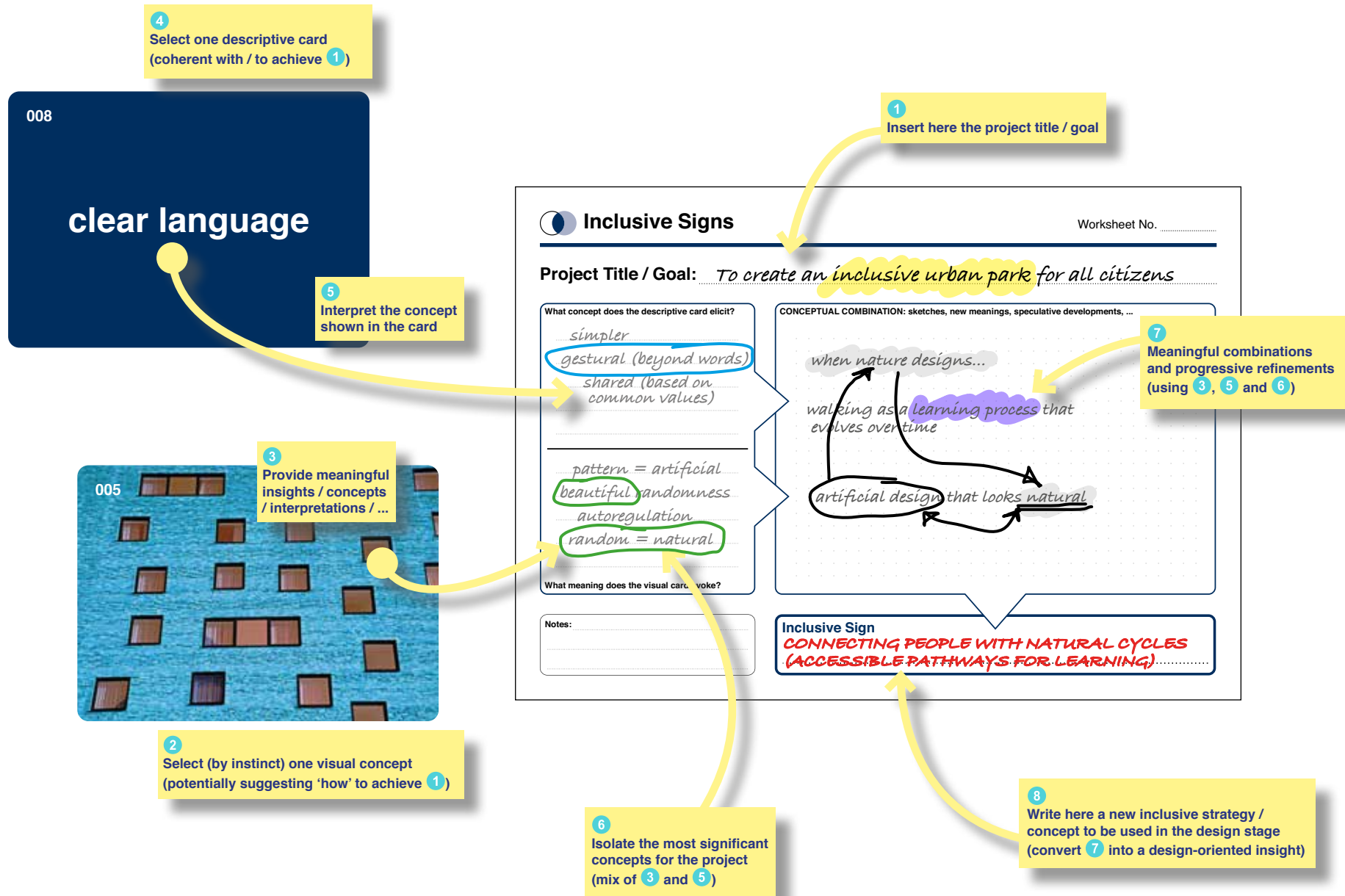
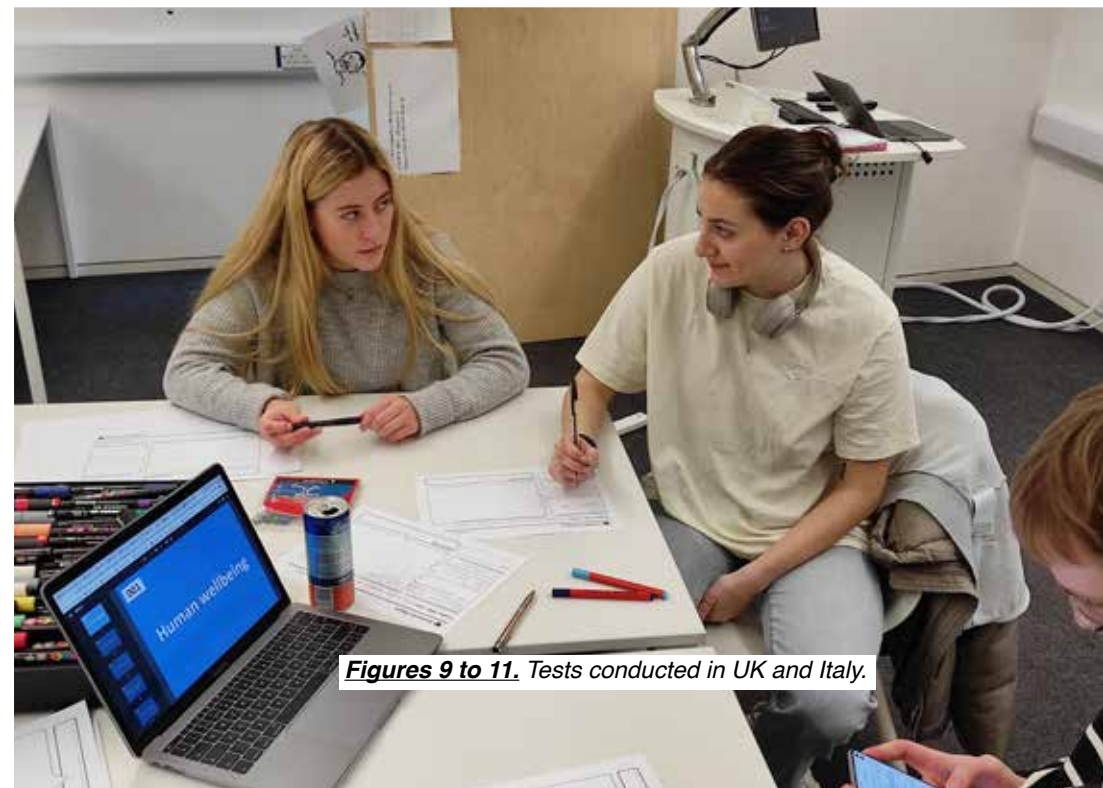
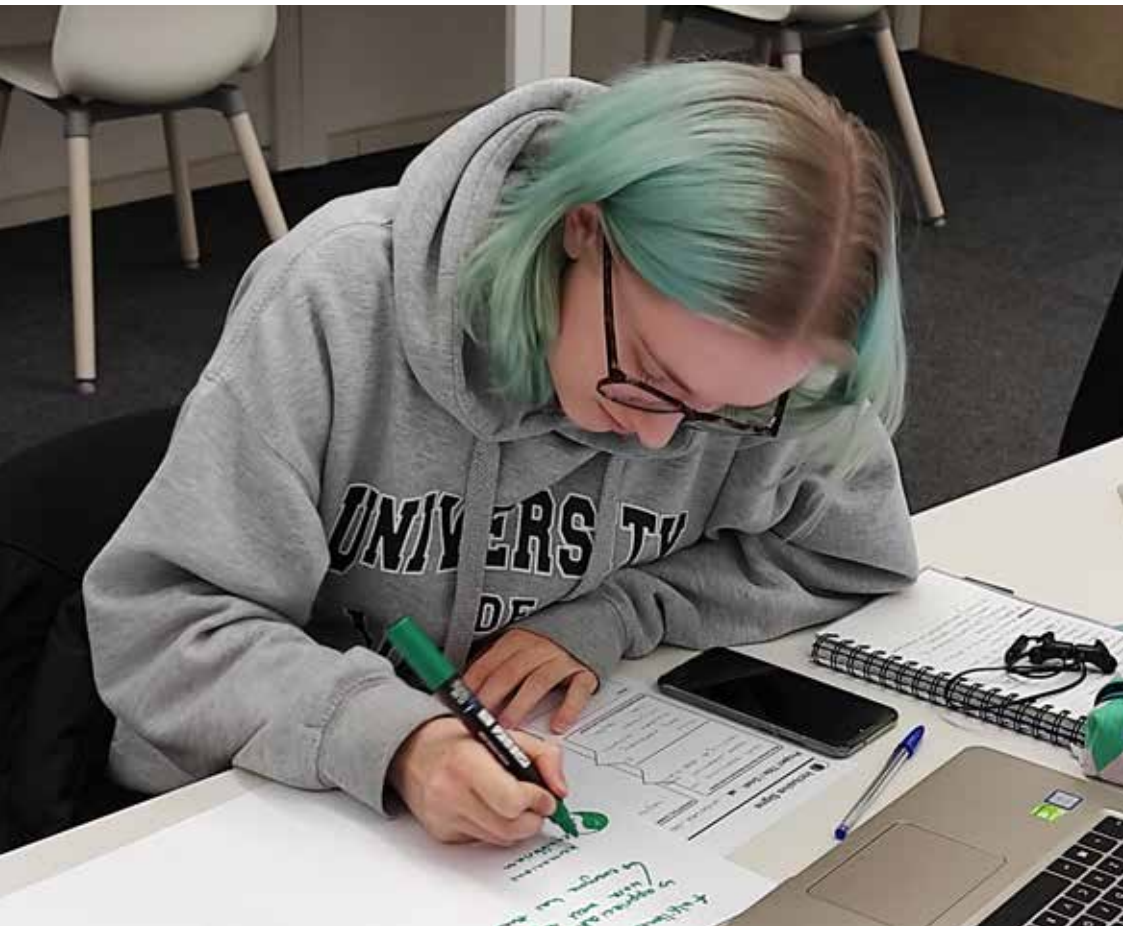


Figure 8. Inclusive Signs: Generation of an inclusive strategy from a visual interpretation (visual cards) – From **1** to **7**.

Workshops and tests performed

Inclusive Signs has been validated through several trials performed in United Kingdom (University of Lincoln) and Italy (University of Florence and University of Chieti-Pescara) with students.

This process provided scientific generalization of results and confirmation of the approach used to generate inclusive signs. Figures from 9 to 17 show the synthesis of main findings developed by students in UK and Italy during guided tests and workshops.



Figures 9 to 11. Tests conducted in UK and Italy.



Figure 12. Studio session at the University of Lincoln (UK).

Project Title / Goal: INCLUSIVE EQUIPMENT (SAD & Ocular Authorities)

What concept does the descriptive card elicit?

HAPPINESS. (17)

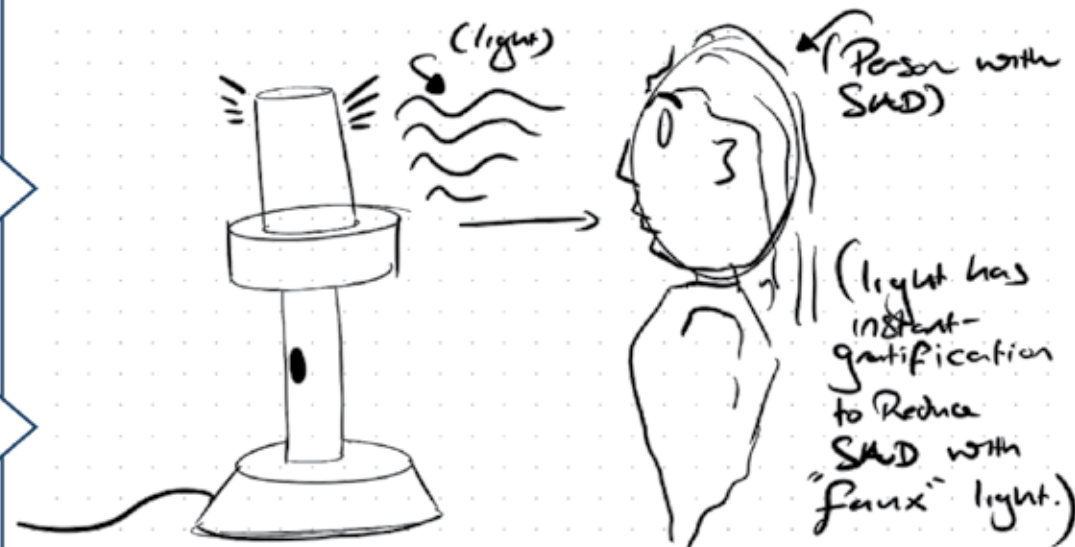
(65)

STRAWBERRY CAKE,
Satisfaction, Tastefulness,
Rough Perfection & Boldness

What meaning does the visual card evoke?

Notes: EATING CAKE GIVES INSTANT-
gratification & gives happiness 😊

CONCEPTUAL COMBINATION: sketches, new meanings, speculative developments, ...



Inclusive Sign

Instant gratification interaction with USER.

Inclusive Signs

Worksheet No. _____

Project Title / Goal: ENCLUSIVE EQUIPMENT (SAD & Ocular Activities)

What concept does the descriptive card elicit?

(60)

LISTENING, WATCHING, TALKING

A clear focus to Success

CHASS

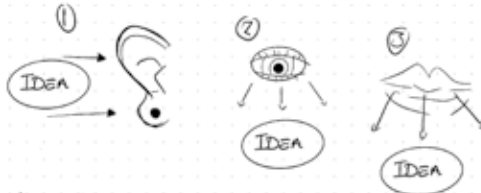
(84)

Smart, Collect & a Path to Project Completion.

What meaning does the visual card evoke?

Notes: Smooth easy way to succeed in a project. Be clear & motivational.

CONCEPTUAL COMBINATION: sketches, new meanings, speculative developments, ...



- 1- only listen
- 2- only look
- 3- make judgment

There is as much relevant info & only then speak it

Inclusive Sign

Understanding, Thinking & Participating

Inclusive Signs

Worksheet No. _____

Project Title / Goal: ENCLUSIVE EQUIPMENT (SAD & Ocular Activities)

What concept does the descriptive card elicit?

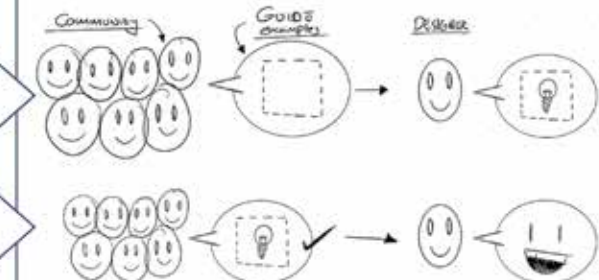
Community interaction (19)
Working around / alongside of the affected Community

Bill Ridge (92)

People showed leads but then to explore in the area. Working with advice from others.

Notes: Standing = Project feels like Community = out of a Cycle!

CONCEPTUAL COMBINATION: sketches, new meanings, speculative developments, ...



Inclusive Sign

GUIDE LINE DESIGNING

Inclusive Signs

Worksheet No. _____

Project Title / Goal: ENCLUSIVE EQUIPMENT (SAD & Ocular Activities)

What concept does the descriptive card elicit?

(64)

Involvement & ENGAGEMENT

Thinking & hearing the right people the right questions.

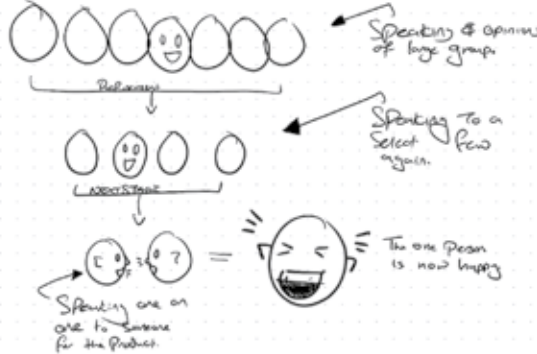
Spoken Person (88)

↳ might not see the team behind it but they help to get the 'an' person to the 'mean' (outcome goal)

What meaning does the visual card evoke?

Notes: Team Collaboration means being a background character.

CONCEPTUAL COMBINATION: sketches, new meanings, speculative developments, ...



Inclusive Sign

ENGAGEMENT & INCLUSIVITY DESIGN

Inclusive Signs

Worksheet No. _____

Project Title / Goal: ENCLUSIVE EQUIPMENT (SAD & Ocular Activities)

What concept does the descriptive card elicit?

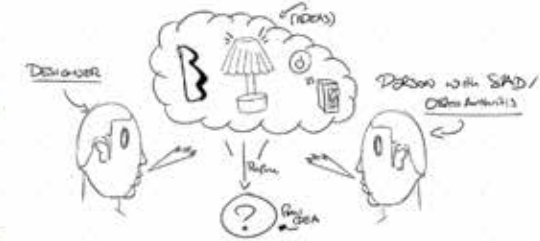
Co-Creation (22)
Working with people actively in Design Process.

Stacy Dives (79)

↳ Counters, trust with others, Success through collaboration.

Notes: working with not for is always Different.

CONCEPTUAL COMBINATION: sketches, new meanings, speculative developments, ...



Collaboration of Designs with the person who is to be thinking for. Not Client But Average Person

Inclusive Sign

Collaboration with those affected.

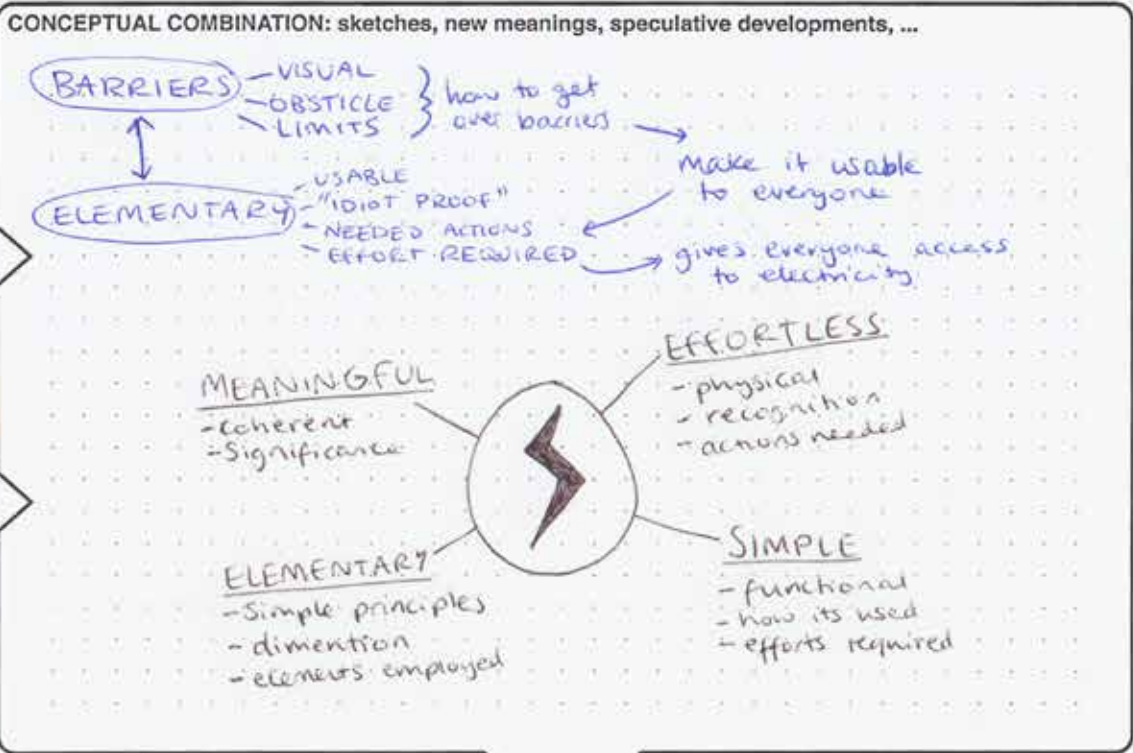
Project Title / Goal: unrestricted Electricity - Katrina

③ What concept does the descriptive card elicit?
EQUAL OPPORTUNITIES
NO RESTRICTED BARRIERS
UNRESTRAINED
VISIBLE OPPORTUNITY

PHOTO OF SCREWS + SCREWDRIVERS
FIXABLE, HELPFUL
SIMPLE ACTIONS
↳ ELEMENTARY
RECOGNISABLE
UNDERSTANDABLE

④④ What meaning does the visual card evoke?

Notes: _____



Inclusive Sign
"M.E.S.E." Strategy

4

fulfillment in Symphony

- ↳ appreciation when things work well together
- ↳ everyone has their own opinion

- . combination of things
- . consistent from start → end

functionally & aesthetically

result of everything working correctly together, if one bit goes wrong it sounds bad.



harmonious equilibrium

↳ Yin & Yang Action

+ Empathically enabling actions that are fully manageable



Encourage families/careers of those who are suffering with dementia to spend meaningful time together through enabling actions.

Resulting in a shared experience for all parties that is both gratifying but also relieving emotional strain.

Figure 16. Inclusive Signs: Design strategy to create enabling actions at home (Author: Declan Greene).

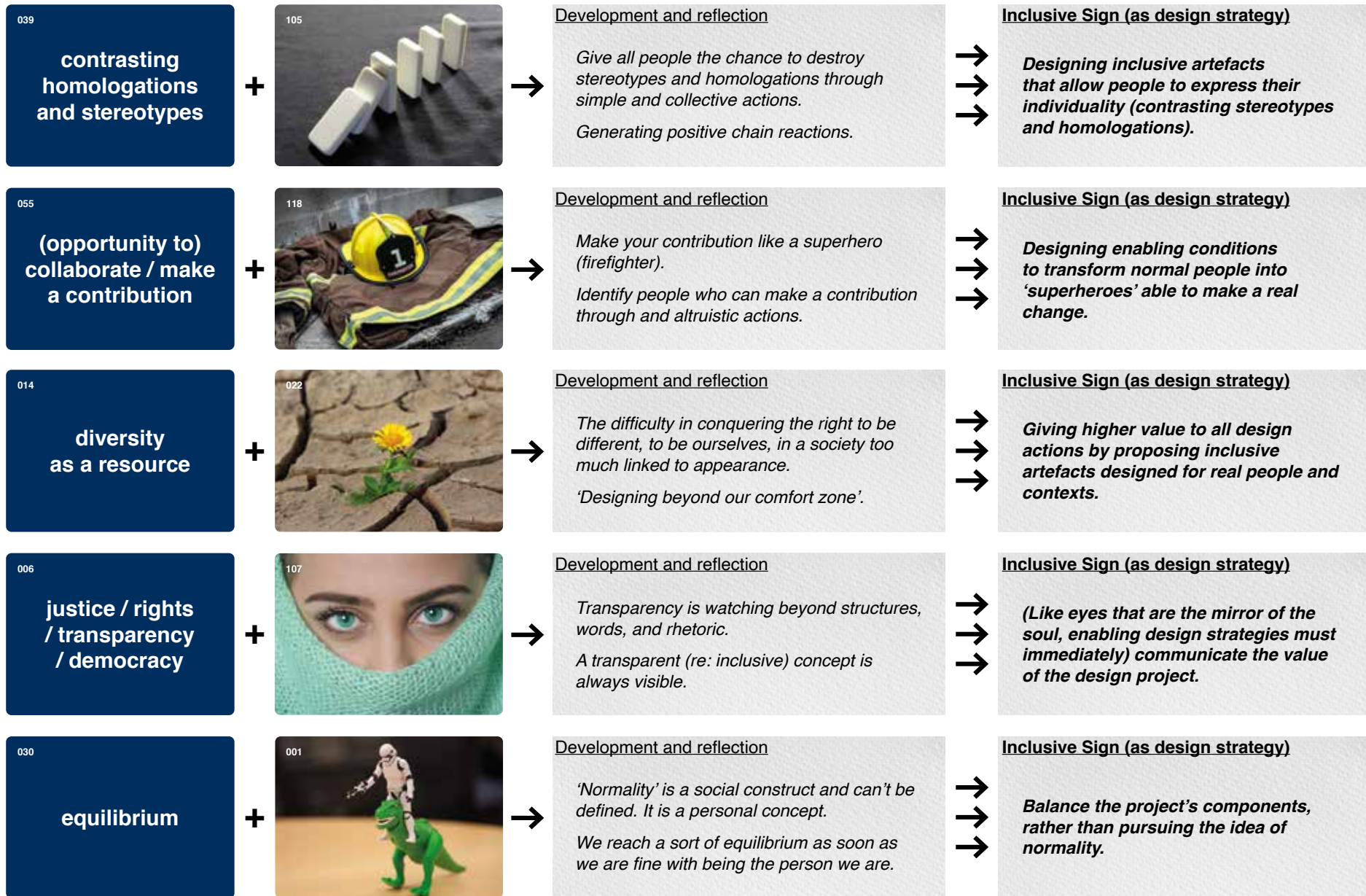


Figure 17. Inclusive Signs generated during tests performed in UK and Italy by Product Design and Industrial Design students.

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- Students in UK and Italy for the valuable inputs provided through the online tests and the studio sessions.





Part 2

The open access toolkit

gender / race
/ sexuality



a contribution

035

cohesion and
coherence

115



020

multicul

028



018

people
/ community

078



058

abilities
and disabilities

018



006

justice / right
/ transparency
/ democracy

074



050

protect / advoc
/ give value

111



001

human w

070



024

063

sonal belie



eritage

004

bottom-up action

091



022

co-creation

yes / with /
together / visit

077



059



015

open collaboration

084



038

overcoming limitations
or biases

037



032

nourish

014

diversity
as a resource

107



040

central / relevant

056



021



003

access to

096



007

wellbeing

001

human wellbeing

002

participation

003

**access to
resources**

004

bottom-up actions

005

social advantage

006

**justice / rights
/ transparency
/ democracy**

007

**prosperity and
improvement**

008

clear language

009

common values

010

identity

011

**shared visions
and ideas**

012

**collective learning
(process of)**

013

social change

014

**diversity
as a resource**

015

open collaboration

016

public interaction

017

happiness and joy

018

**people
/ community**

019

**community
integration**

020

multiculturalism

021

**gender / race
/ sexuality**

022

co-creation

023

support

024

**context
/ contextual**

025

**positive
transformations**

026

fairness

027

human rights

028

**mixture and
diversification**

029

heritage

030

equilibrium

031

real living context

032

nourish

033

development

034

**respect / dignity
/ promotion**

035

**cohesion and
coherence**

036

health and wealth

037

active commitment

038

**overcoming limits
or biases**

039

**contrasting
homologations
and stereotypes**

040

central / relevant

041

**psychophysical
congruence**

042

fair future

043

**cognitive
coherence**

044

**aesthetics
and meaning**

045

personal belief

046

**community
strength**

047

**relational
connections**

048

involvement

049

rise of awareness

050

**protect / advocate
/ give value**

051

holism / holistic

052

quality / better

053

**pleasantness and
enjoyment**

054

multigenerational

055

**(opportunity to)
collaborate / make
a contribution**

056

presence / be there

057

**yes / with /
together / visible
/ for all**

058

**abilities
and disabilities**

059

resilience

060

**listening / watching
/ talking / doing**

001



002



003



004



005



006



007



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009



010



011



012



013



014



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018



019



020



021



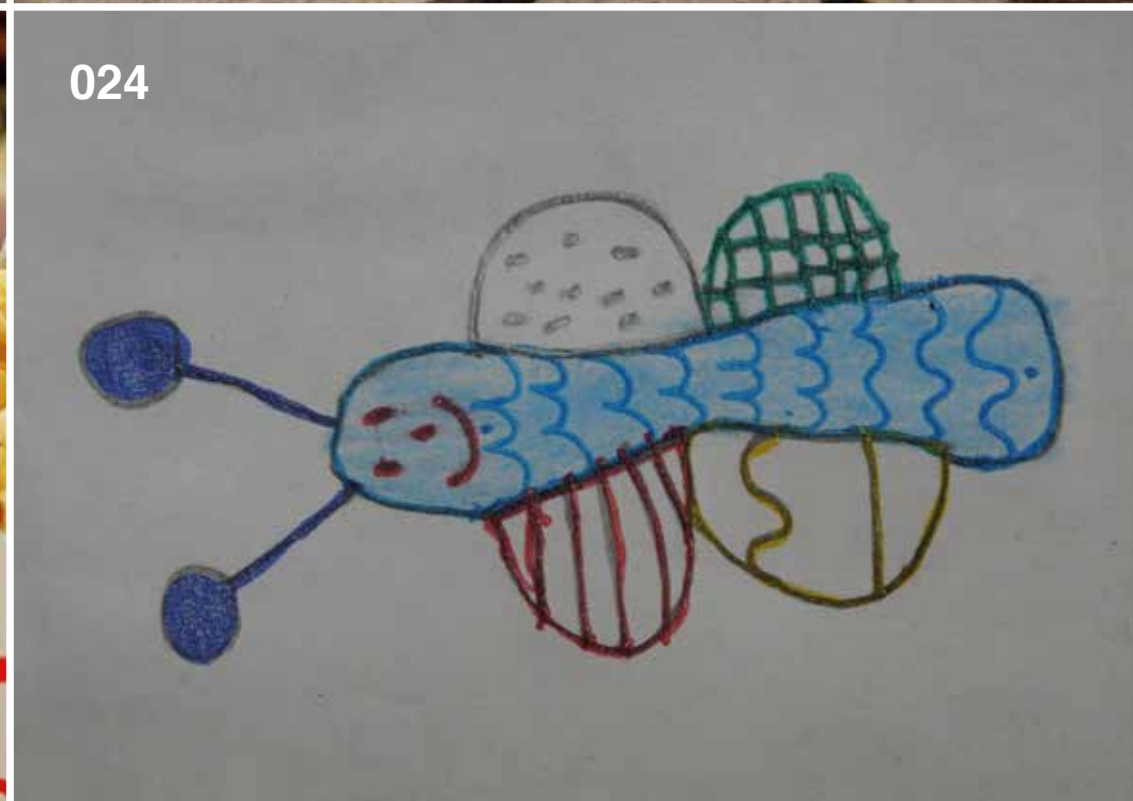
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023



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027



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030



031



032



033



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035



036



037



038



039



040



041



042



043



044



045



046



047



048



049



050



051



052



057



058



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081



082



083



084



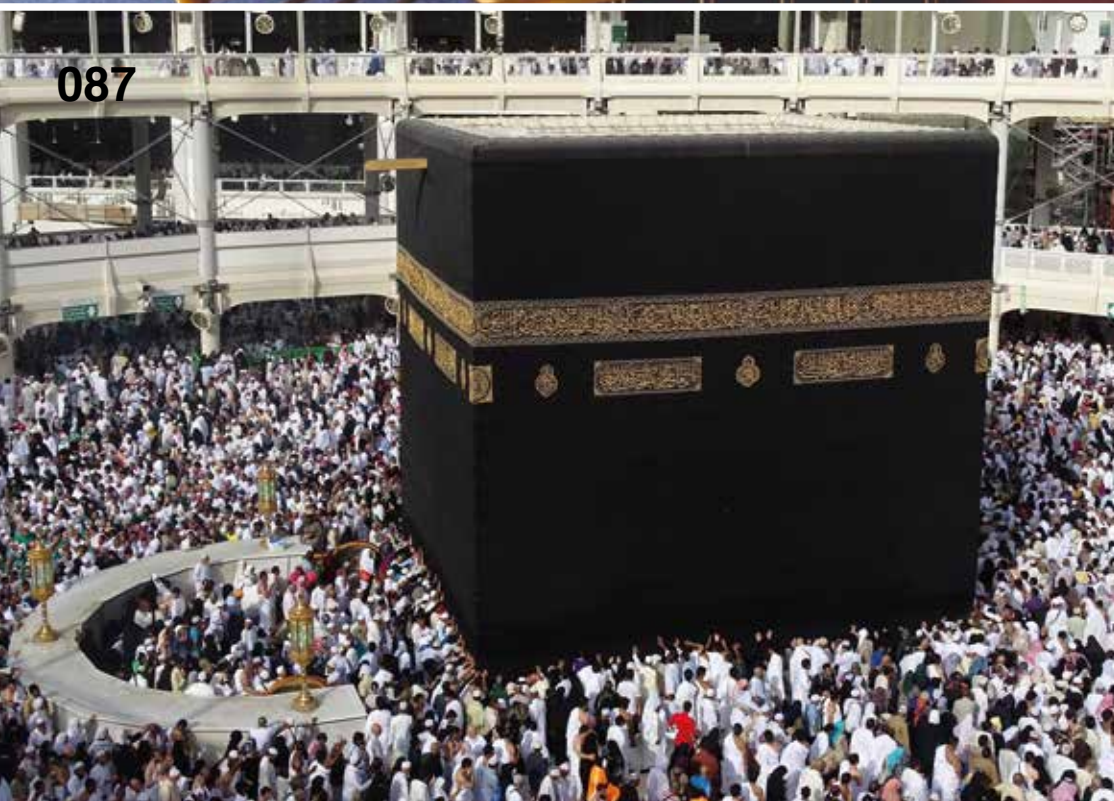
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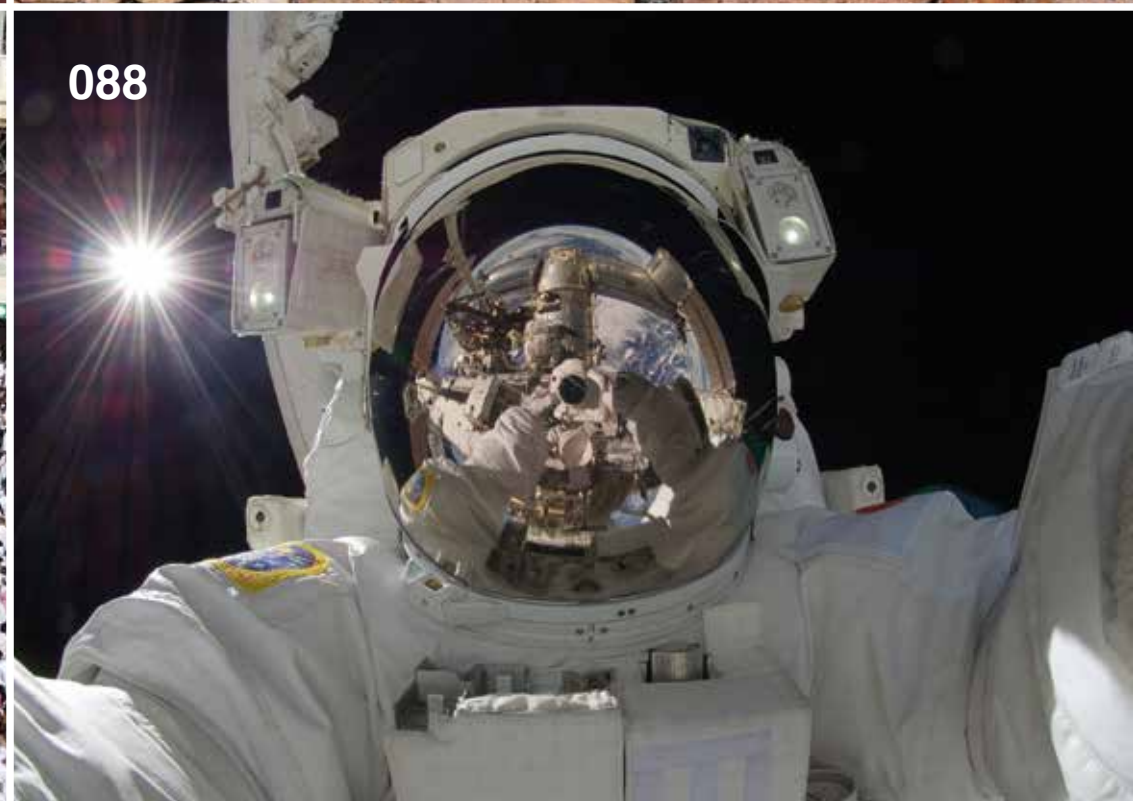
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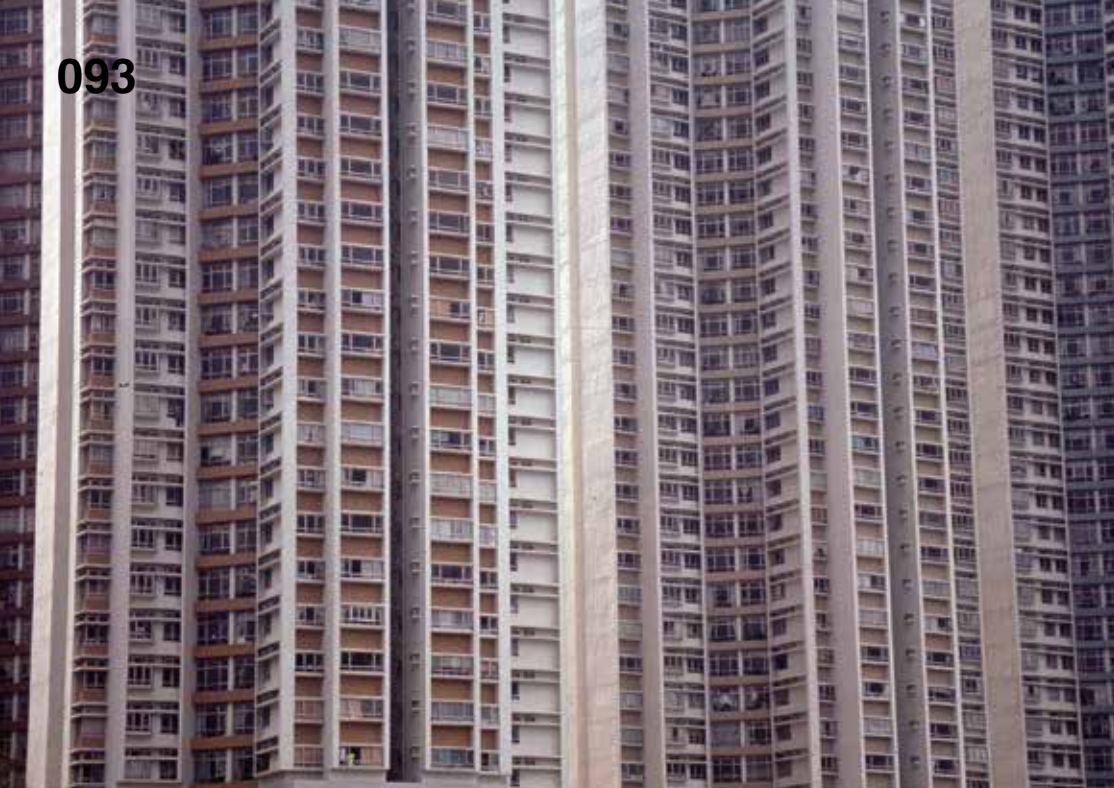
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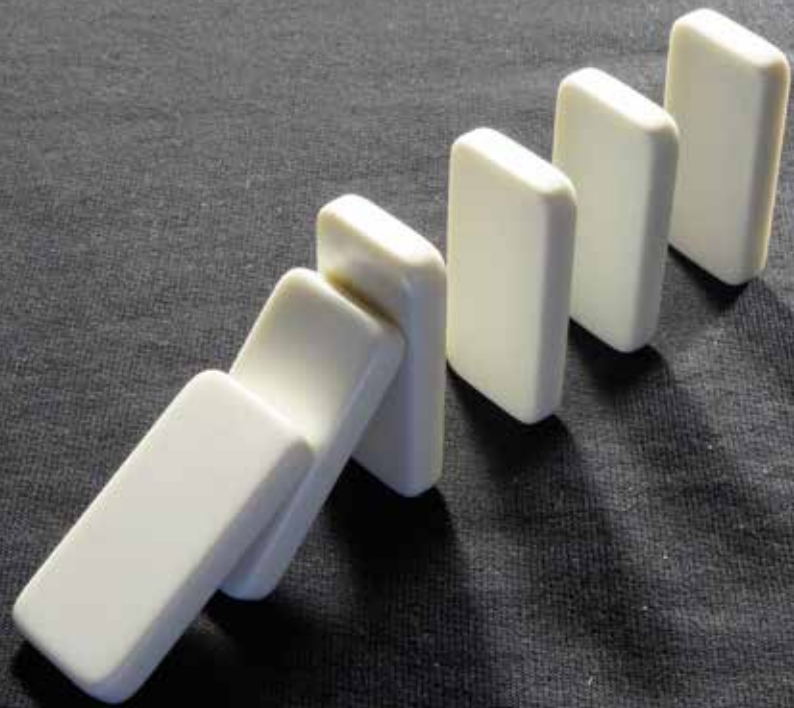
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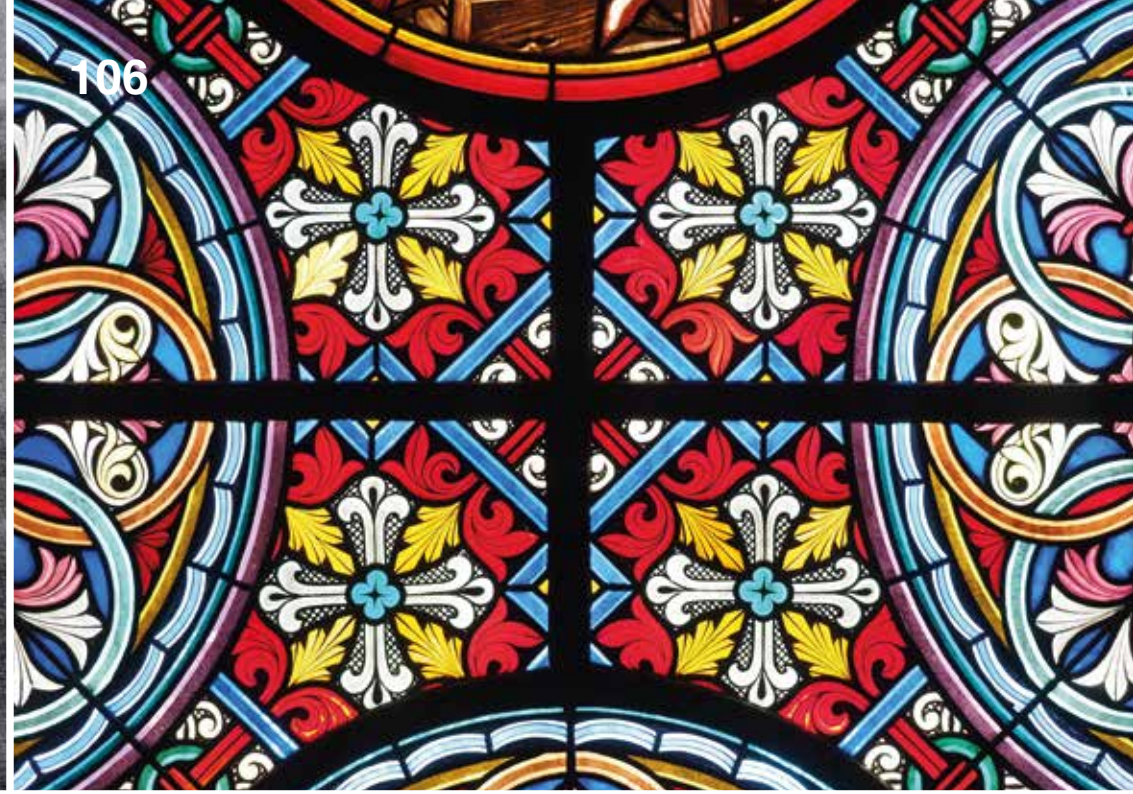
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111



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17:30	SIA	JAKARTA	SQ162
18:00	SIA	BANGKOK	SQ68
18:10	SIA	JAKARTA	LH778
18:35	SIA	PHUKET	MI758
18:45	SIA	JAKARTA	SQ166
18:45	SIA	PENANG	SQ198
18:50	SIA	DHAKA	SQ436
18:50	SIA	KUCHING	MI371
18:55	malaysia	KUALA LUMPUR	SQ50
19:00	SIA	BALI	MH6
19:00	SIA	HONG KONG	SQ1
19:00	SIA	K4LSRTZ	SQ
19:55	malaysia	KUALA LUMPUR	M
20:00	SIA	BALI	
20:00	SIA	HONG KONG	

113



114



115



116



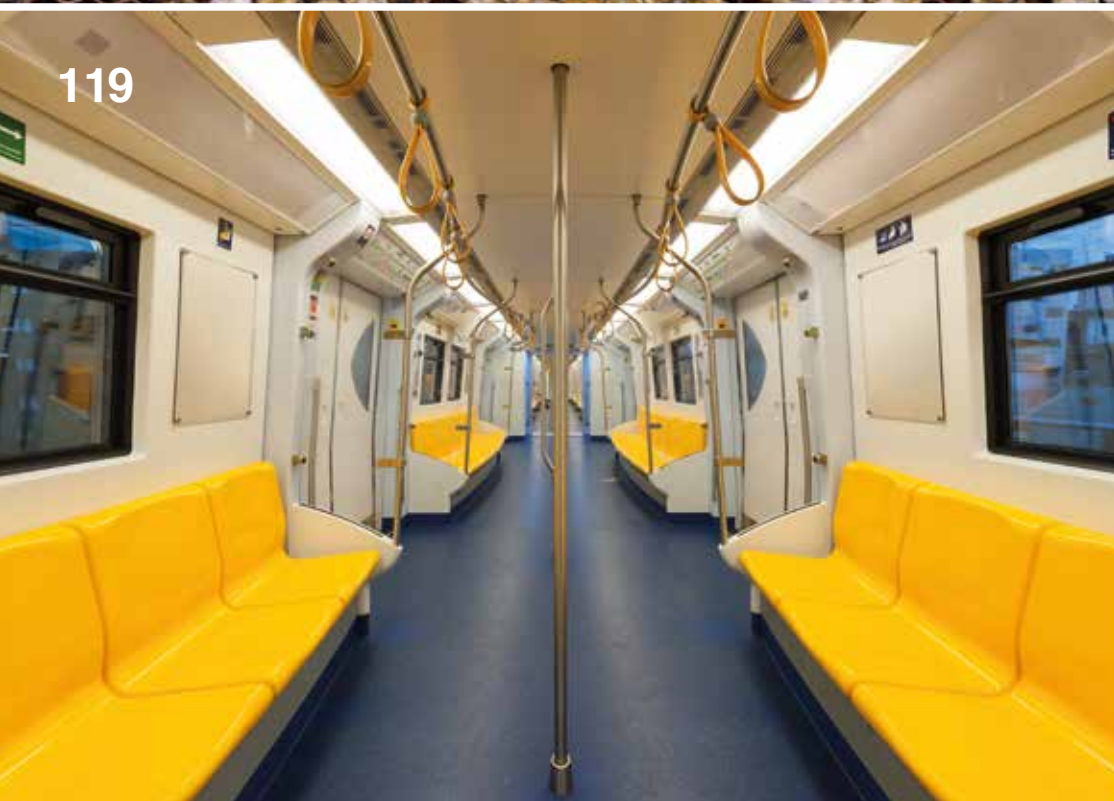
117



118



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A series of 20 horizontal dotted lines spanning the width of the page, intended for writing or drawing.





Inclusive Signs is an [open access project](#) and an [original inclusive toolkit](#) made at the Lincoln School of Design, University of Lincoln, United Kingdom



Can designers and stakeholders generate meaningful design strategies and controlled visions for the future inclusive society that overcome the idea of 'design for disabled people'?

Is it possible to generate creative and innovative meta-design insights for future inclusive projects?

The design of inclusive and enabling artefacts (i.e.: products, services, systems of products, etc.) requires new creative processes able to interpret the complexity of Social Inclusion.

Inclusive Signs is a card-based toolkit designed to generate creative and inclusive design concepts, meta-design insights and strategies. A set of 180 cards and a worksheet can be used to run creative brainstorming, workshops, discussions, as well as to find inspirational trajectories and meaningful values. **Inclusive Signs** employs semiotic patterns to produce meaningful inclusive-oriented design meanings – *inclusive signs* precisely. The creation of *inclusive signs* is operated through instinctive combination of descriptive and visual concepts. Therefore, both designers, stakeholders, and design students can imagine future inclusive scenarios and new generation of enabling solutions in a new way.

This handbook provides useful instructions on how to generate inclusive meta-design concepts through the **Inclusive Signs** toolkit. Handbook and the toolkit (180 cards and worksheet) here presented are part of an open access project and are distributed under [CC BY-NC-SA 4.0](https://creativecommons.org/licenses/by-nc-sa/4.0/) license.