SUSTAINABLE ENERGY FOR ALL BY DESIGN

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Scenario based design for inclusive touristic accommodations

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Cultural context

Interior design as multi dimensional discipline able to deal with the phenomena of contemporary society, through contamination with Humanities, by comparing and profitable application of experimental methods.
It is the act of conceptual and practical design of **containers of relations**. A creative act not only able to answer to functional needs, but also to **social and relational needs** in which also the sensory and soft qualities of the environments become an **immersive experience**.

Social perview

The project as “arte-fatto” responds to people’s sociological, intellectual and even political dimensions. In fact, **designers invite people to behave in a certain way**.
Living experiences, users could affect a full recognition, satisfy new curiosity, be surprised or amused, arouse positive emotions;
or, on the other hand, could live a more or less conscious **sense of frustration and devaluation** (Vash & Crewe, 2004), especially in people that have to face physiological or pathological situations.

...objects have their own life, [...], in the sense that they reinforce social practices exactly as social practices strengthen them.
Molotch, 2005

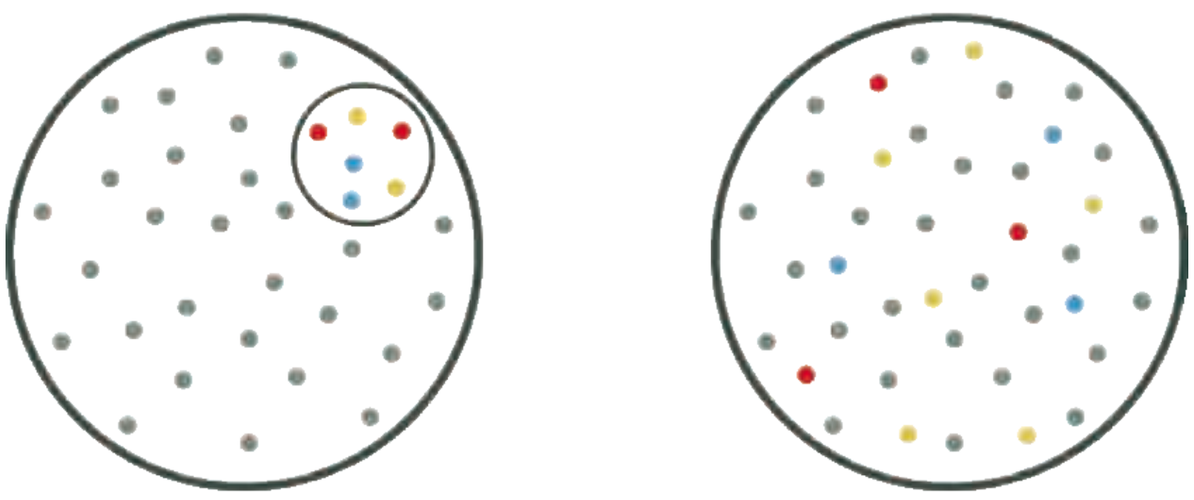
Design is the conscious effort to impose a meaningful order.
Papanek, 1971

This means engaging designers in new ways of thinking and developing more universally designed environments usable to the greatest extent possible by all people without the need for adaptation or specialized design.
Mace, 1997

Good design enables, bad design disables.
EIDD, 2004

Research goals

The aim of the research is to support the switch from integration to social inclusion in designing touristic accommodations.



The main goal is to provide a range of tools to do so, through design driven planning of interiors, services and products.

Methodology

- mixed
- multidisciplinar
- qualitative
- empirical
- through design

Tools for interpretation

- interviews
- patterns
- interpretative matrix
- extrapolation
  Bardach, 1994; Ongaro, 2009

Tools

Desk research
and literature review

Grounded theory
Denzin and Lincoln, 2005

Best practices
Overman and Boyd, 1994
Stenstrom and Laine, 2006
Vasely, 2011

Case studies
Eisenhardt, 1989

Action Research
Denscombe, 2010

Output

Carroll, 2000, 2002, 2004
Maschi, 2000
Manzini and Jegou, 2001

Concept-based scenario (toolset)
for development of
inclusive context-based
design brief
(spaces, services and products)

Research backgrounds and structure

MULTIDISCIPLINAR RESEARCH
SCIENTIFIC BACKGROUND

Human diversity
. Societal & cultural framework
International health law
International convention
statal legal framework

. Design culture
Architecture
Design

Accessible Tourism
. Societal & cultural framework
. Legal framework
. Economic framework & stakeholders

THEORETICAL FRAMEWORK
DEFINITION

General research question
How to develop a systemic & experiential approach to interior design for all?

DESIGN INSIGHTS
PATTERN DEFINITION

Literature review
. Economics
. Sociology
. Cognitive Psychology
. Ergonomics

CS 1+3 PAR 3

Literature review
. Economics & Tourism Management

BP 10 CS 5

INTERIORS

STRATEGIES
DEFINITION

Words and language
Inclusive environment definition
Accessible experience definition

INTERPRETIVE
MATRIX

Interpretative directions
PwD vs for all
Access vs experience

Research question
How design social inclusion in accommodations interior, services and products?

How the Design community could debate on universal design of the experiences offered by the accommodation?

Model and tools
Scenario toolset definition

EXPLORATION | INTERPRETATION | RESULTS

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1+3	3

Literature review
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INTERPRETIVE
MATRIX

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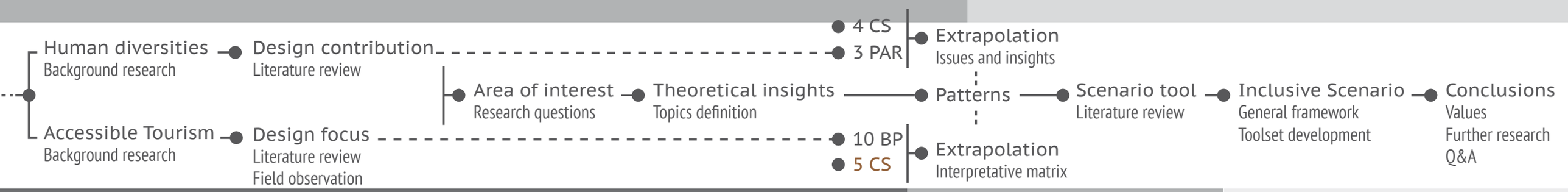
Access vs experience

INTERPRETATION

RESULTS



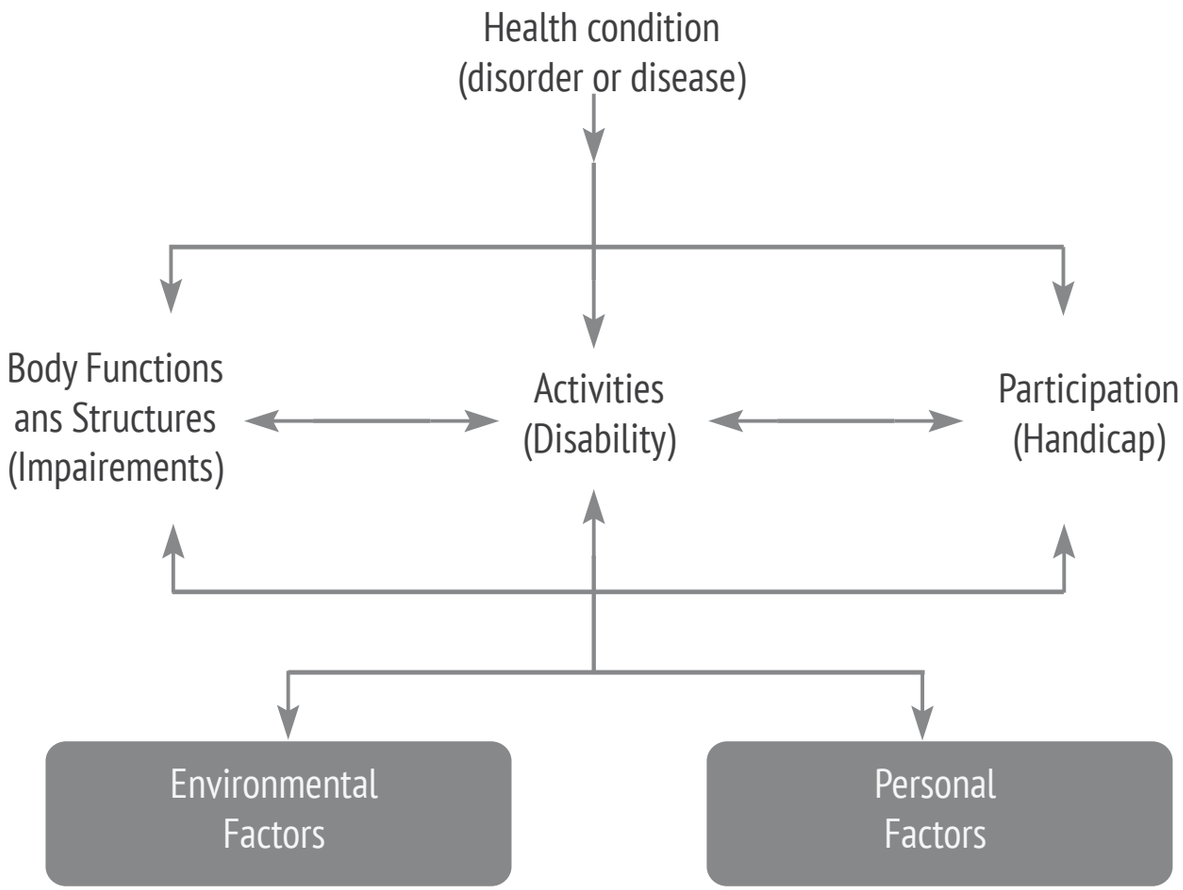
Designing hotel for **all**

Theoretical framework

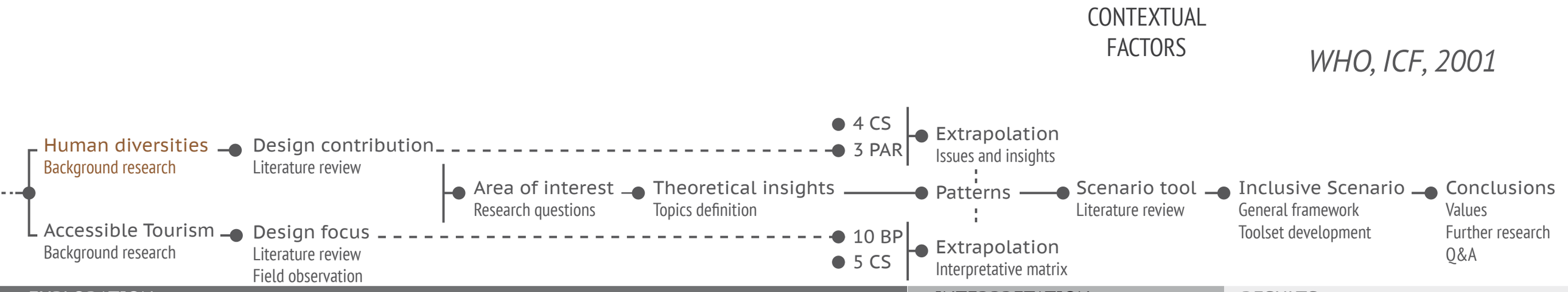
UN Convention on PwD rights, 2006
WHO, ICF, 2001

Recognizing that disability is an evolving concept and that disability results from the interaction between persons with impairments and attitudinal and environmental barriers that hinders their **full and effective participation in society on an equal basis with others.**

UN Convention, 2006



WHO, ICF, 2001



Designing hotel **for all**

Theoretical framework

Universal Design

R.Mace 1997

Equitable use

Flexibility in use

Simple and intuitive use

Perceptible Information

Tolerance for error

Low physical effort

Size and space for approach and use

Wider User base Design

G. Arduini 1991

Autonomy of use

Compatibility

Adaptability and flexibility

Normal image

Ease of use

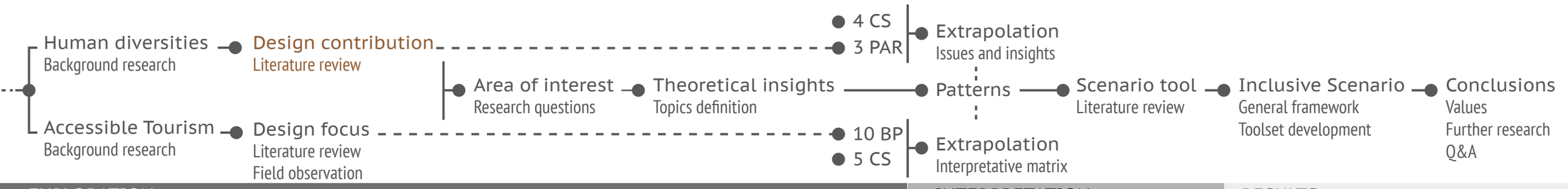
Good quality / price ratio

Safety and reliability

Design for All

Stockholm 2004

Design for All is design for human diversity, social inclusion and equality. Design for All aims to enable all people to have equal opportunities to participate in every aspect of society. To achieve this, the built environment, everyday objects, services, culture and information, everything that is designed and made by people to be used by people must be accessible, convenient for everyone in society to use and responsive to evolving human diversity.



Designing **hotel for all**

Accessible Tourism framework

Context Introduction

The accessible tourism market is growing, thereby sparkling a need for more research from a demand focus.

Kim and Letho, 2012

Muller, 2010

Darcy and Dickson, 2009

Political strategies and laws

UNWTO, 2005

UNWTO, 2013

Italian Tourism Code, 2009

Italian technical norms

Market definition

Eurostat, 2010

Calypso Study, 2010

WHO, 2011

Istat, 2012

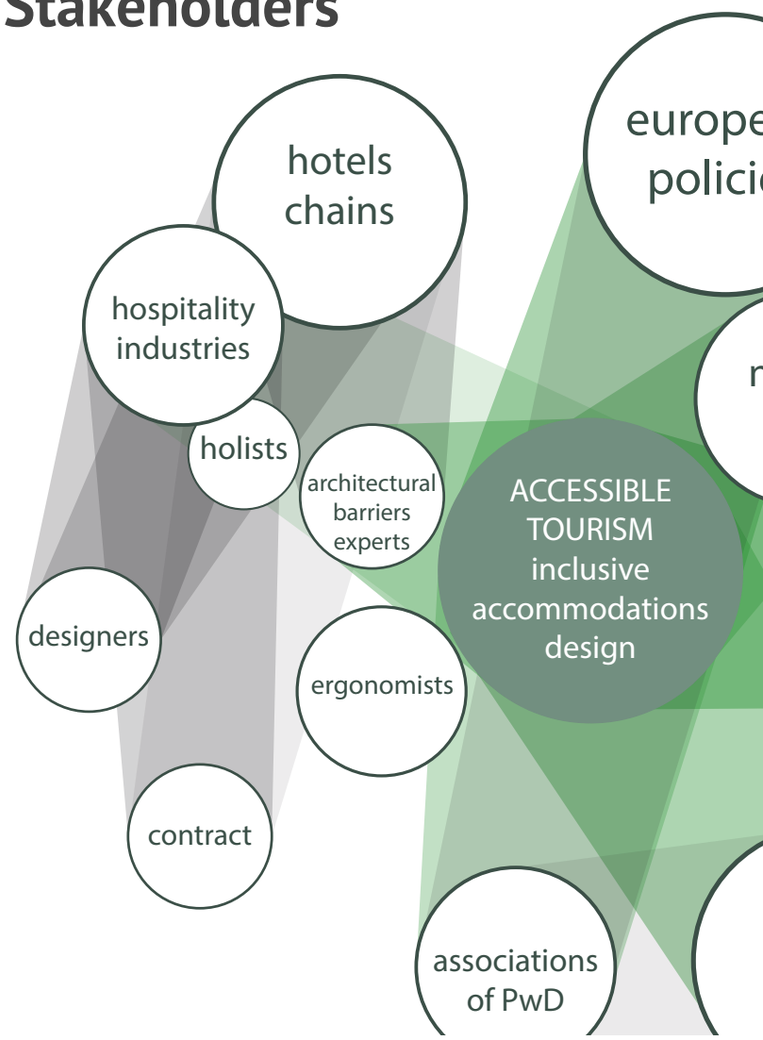
Defining the segment

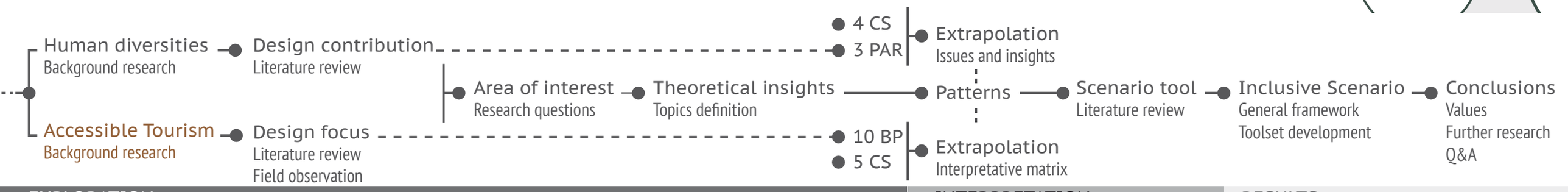
Burnett and Baker, 2001

Kim, Stonesifer and Han, 2012

Daniels, Rodgers and Wiggins, 2004

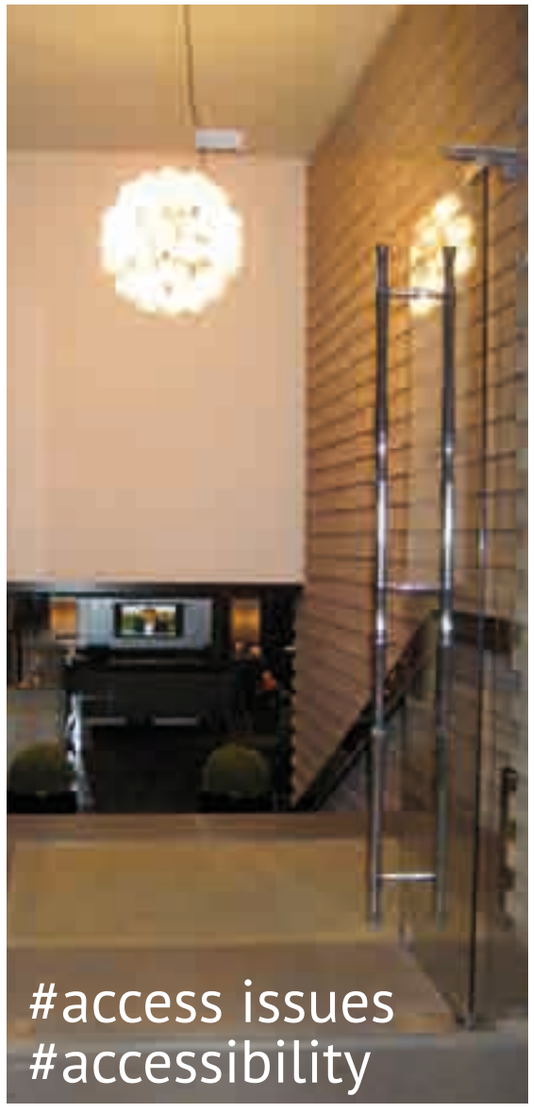
European research Stakeholders





Designing **hotel for all**

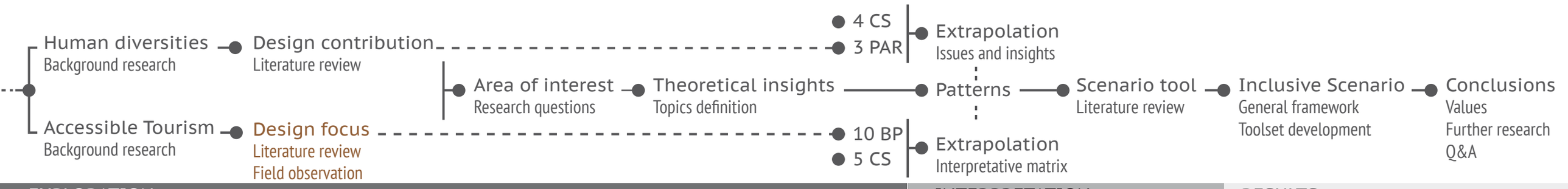
Accessibility in Hospitality sector



Accessible tourism sector is the wider frame where the entire destination has to be accessible.
Israeli, 2002

Availability of adequate accommodation for the overnight of PwD is the fundamental condition to embark in a journey.
Darcy, 2002

If PwD cannot find suitable accommodation that meet their access needs, by necessity, they change their destination choice or do not travel.
Darcy, 2010



Designing **hotel for all**

Accessibility in Hospitality sector

#cultural issues

#discriminant

It has been noted that
tourism experiences for PwD are more than access issues.

Yau, McKercher and Packer, 2004
Shelton and Tucker, 2005
Stumbo and Pegg, 2005

Human diversities
Background research

Accessible Tourism
Background research

Design contribution
Literature review

Design focus
Literature review
Field observation

Area of interest
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Theoretical insights
Topics definition

4 CS
3 PAR

10 BP
5 CS

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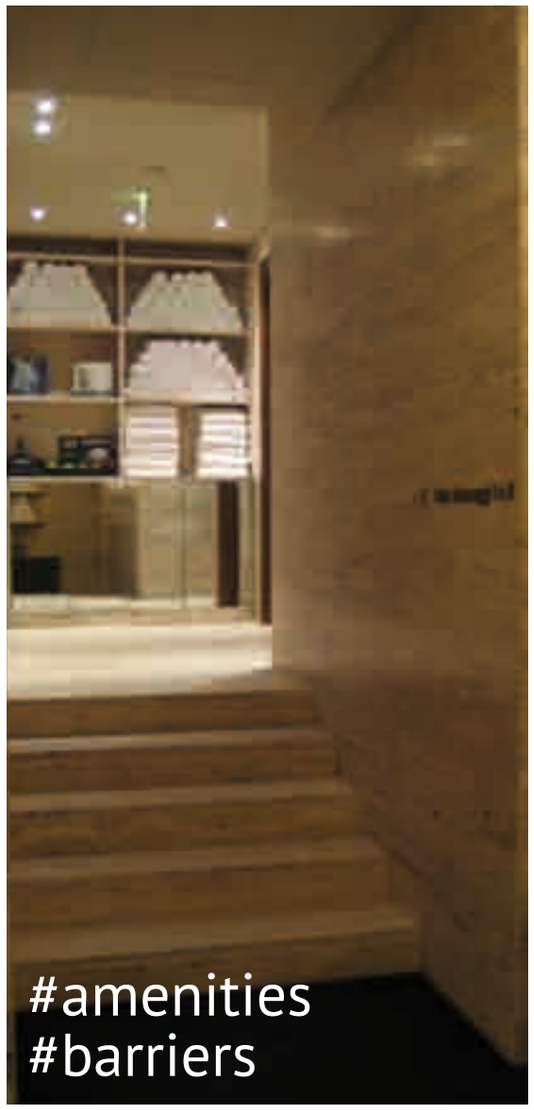
EXPLORATION | INTERPRETATION | RESULTS

Designing **hotel for all**

Accessibility in Hospitality sector

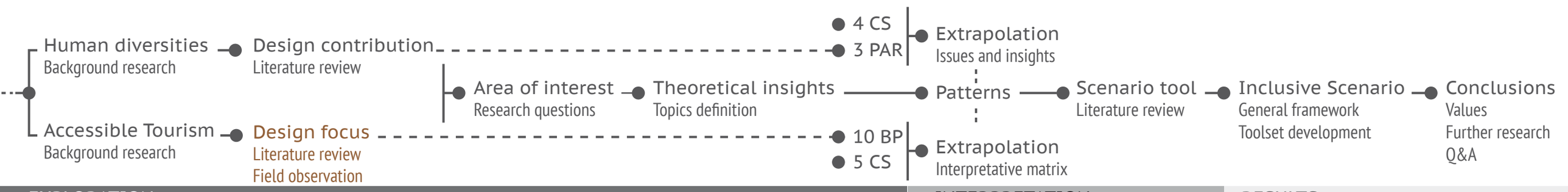


Disabled travellers did not regard themselves as “regular folks”.

Instead, they recognize that they differ from the mainstream population.

They do, however, expect a “regular folks” **experience**.

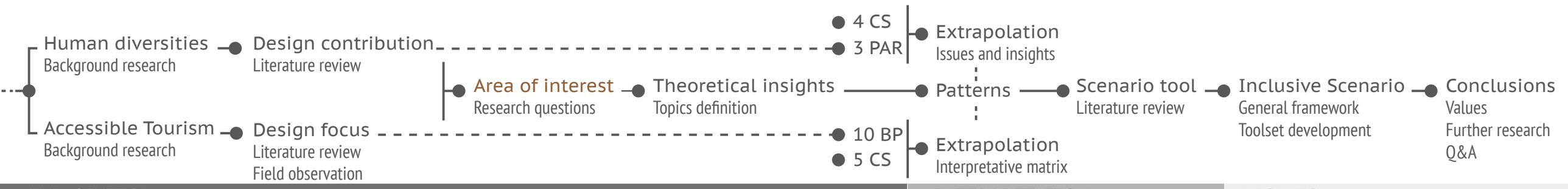
Ray and Ryder, 2000



Designing hotel for all

from integration to inclusion

...It is an ideal path not to meet the technical standards on accessibility, but rather to respond to needs and desires associated with an effective, safe, enjoyable, satisfying and independent use of environments.
The aim of ensuring accessibility and usability has to faced with appropriate solutions incorporated in the design process, regardless of regulatory requirements. It is not about adapting accessibility features required by rules, but it has to create environments starting from the more "fragile" human condition.
It recognizes the importance of how the solution appears, in its expressive value, its communicability.
Monzeglio, 2010

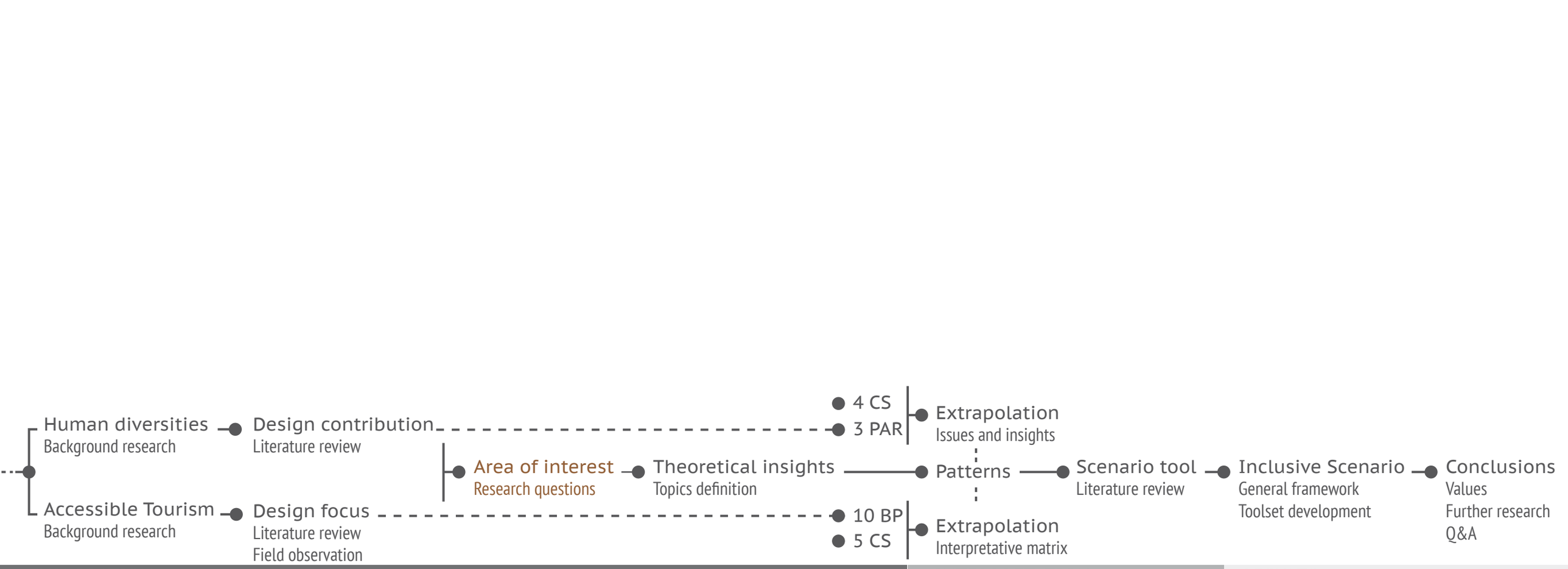


Research questions

How to overcome the regulatory approach?

How to develop a **systemic - holistic- approach** to **inclusive interior** design?

Are there design tools to develop **universal experiences**?



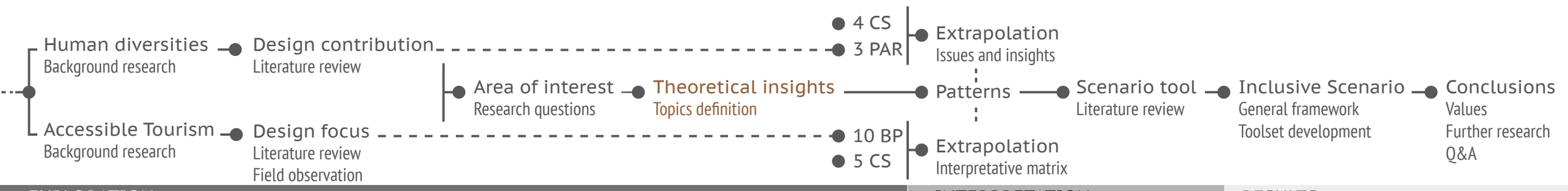
Research questions

#experience

Pine and Gilmore, 1998
Sundbo and Soresen, 2013
Fabris, 2009

Economic Offering	Commodities	Goods	Services	Experiences
Economy	Agrarian	Industrial	Service	Experience
Economic function	Extract	Make	Deliver	Stage
Offering's nature	Fungible	Tangible	Intangible	Memorable
Key attribute	Natural	Standardised	Customized	Personal
Supply method	Stored in bulk	Inventaried after production	Delivered on demand	Revealed on duration
Seller	Trader	Manufacturer	Provider	Stager
Buyer	Market	User	Client	Guest
Demand's factor	Characteristics	Features	Benefits	Sensations

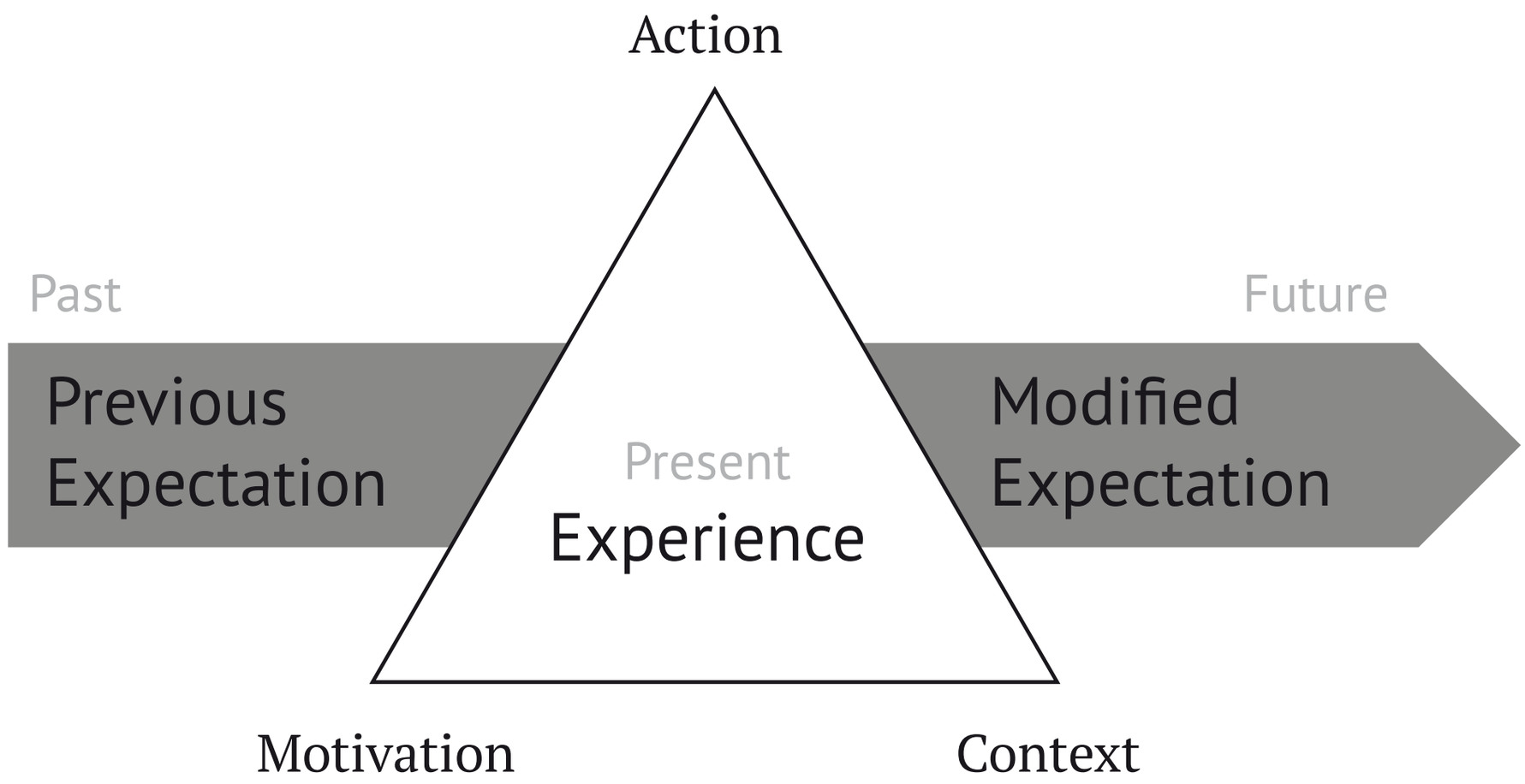
Needs, such as inductors prior to consumption are rapidly giving the way to desires and these are combined with experience research.
Fabris, 2009



Research questions

#design for experience

Makela and Fulton Suri, 2001
WHO, 2001
Rizzo, 2009



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Accessible Tourism
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EXPLORATION | INTERPRETATION | RESULTS

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Makela and Fulton Suri, 2001
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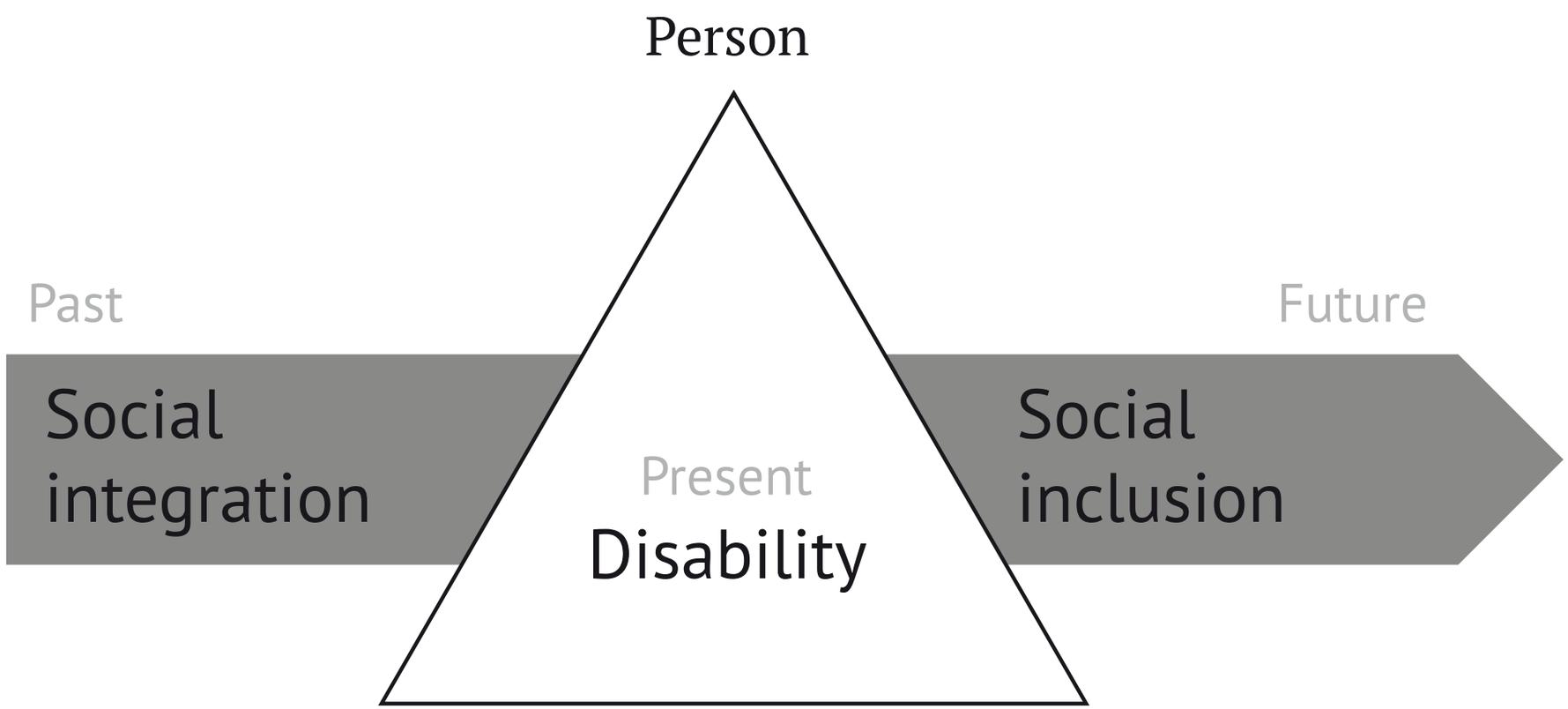

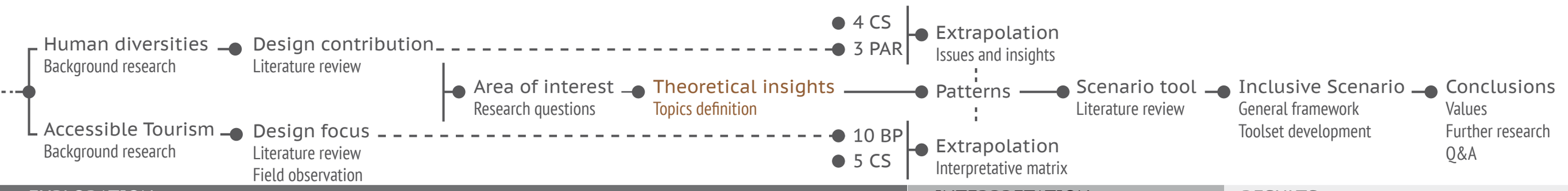

Research questions

#systemic and holistic approach

Mitchell, 1993
Fubini, 2009
ISO/IR 16982/2002

identify
basic functions and objectives

identify
user's context
users, tasks, facilities,
physical, social and organisational
environment

identify user's and
organisational needs
institutional, social, etc

identify and specify the
project requirements
. physical-dimensional compatibility
. senses compatibility
. cognitive compatibility
. safety
. usability
. salubrity
. wellbeing
. pleasantness

define
project solutions

evaluation of design alternatives
in relation to the requirements

identify
basic functions and objectives

one or more solu-
tions fully meet the
project require-
ments
FINAL
SOLUTION

ISO 9241-11/1998;ISO 13407/1999; ISO/IR 16982/2002

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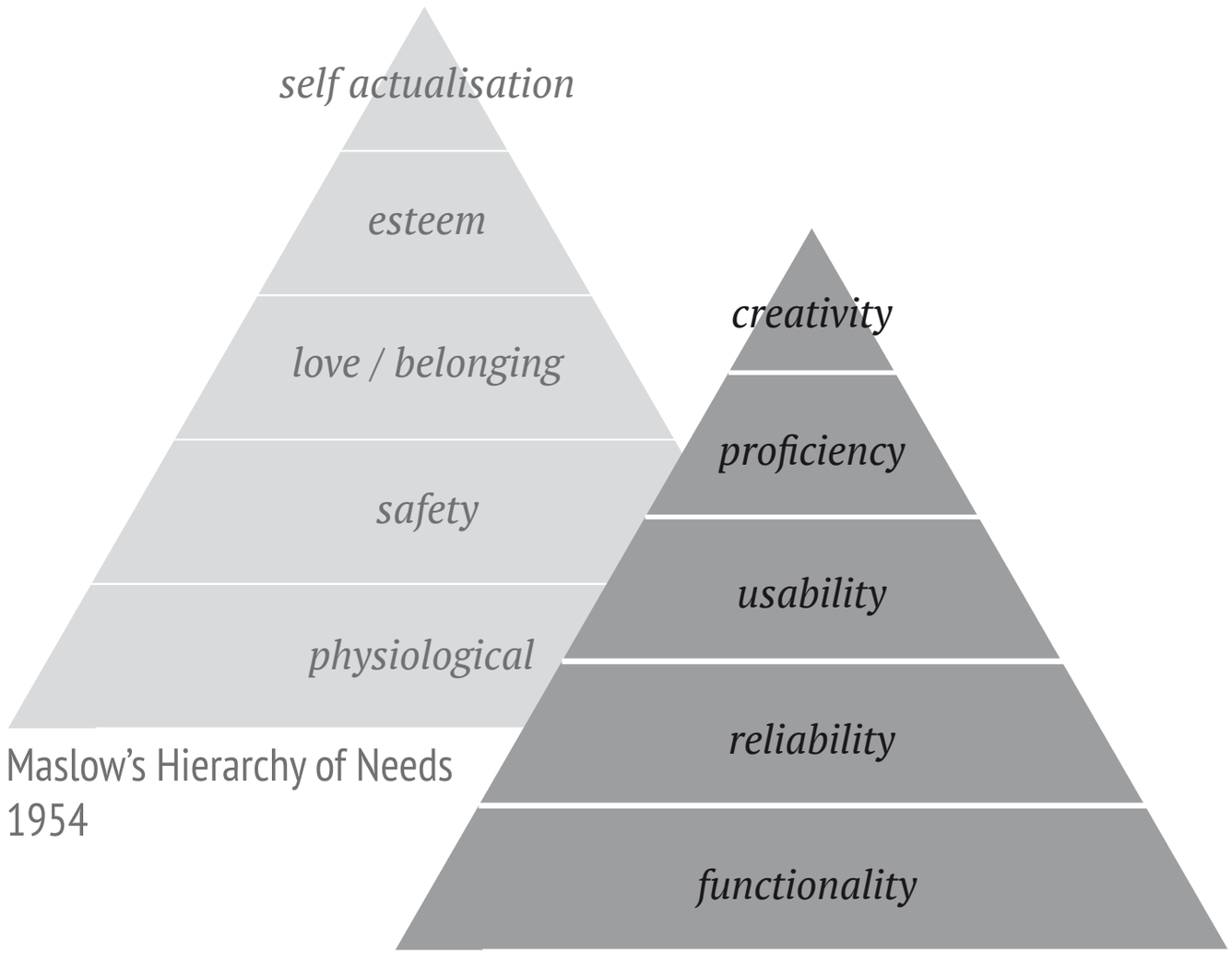
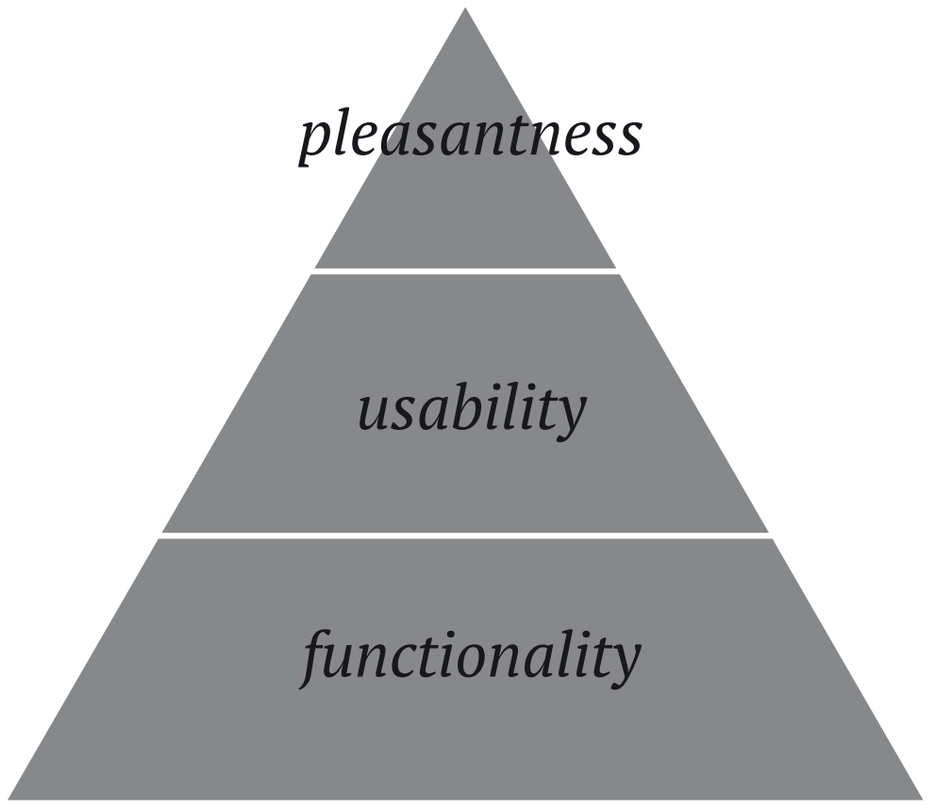
#systemic and holistic approach

Maslow, 1954
Jordan, 1999
Lidwell et al., 2005

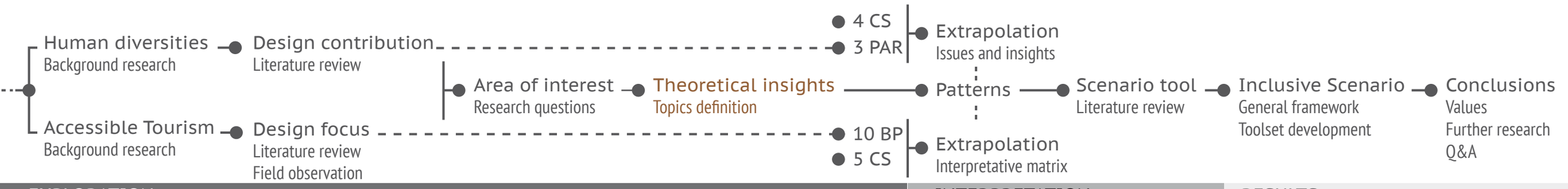


Maslow's Hierarchy of Needs
1954

Design Hierarchy of Needs
Lidwell Holden Butler 2005

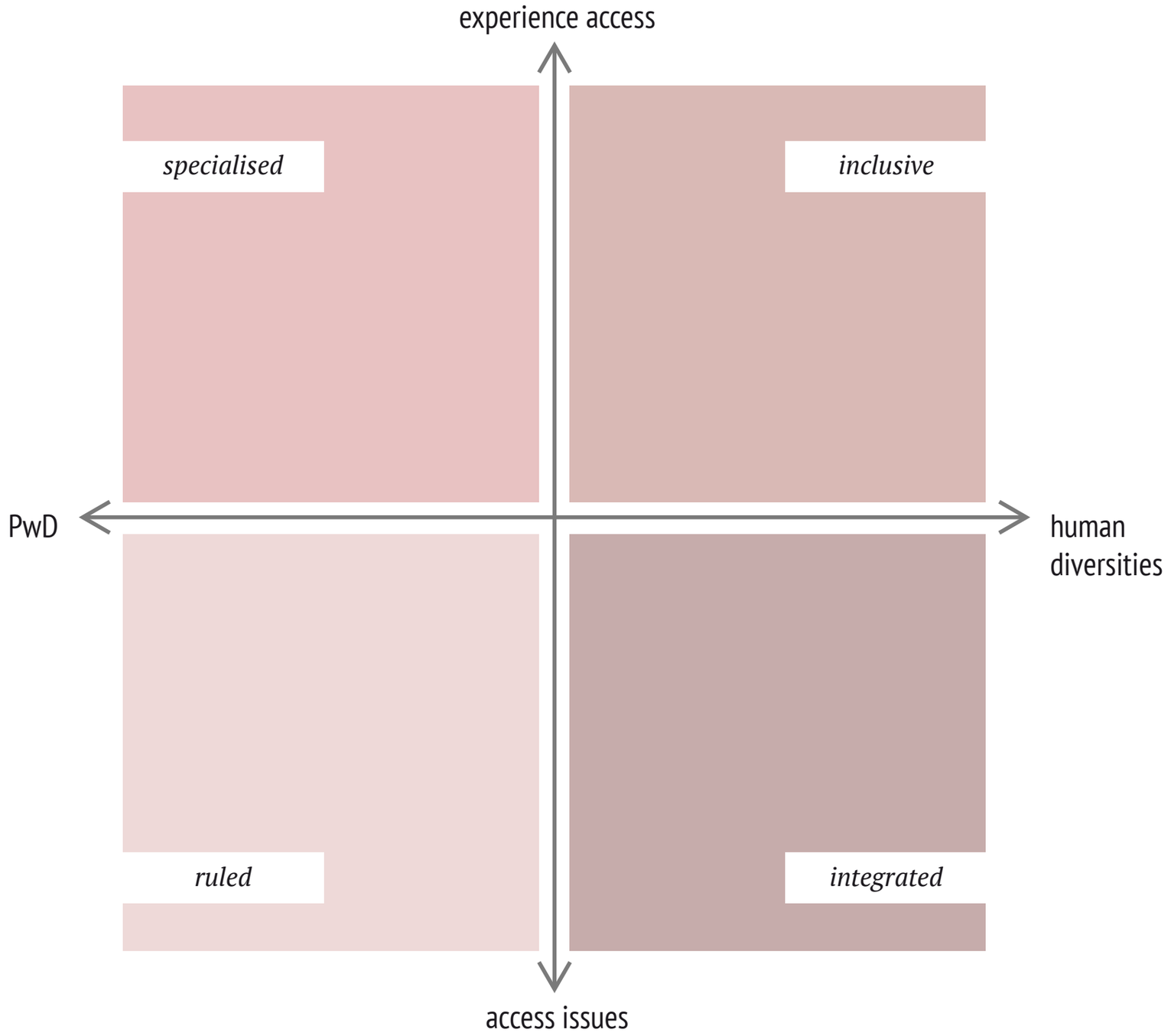


Users Hierarchy of Needs
Jordan 1999



Extrapolation

A model of reading



Cautela, 2007
Petrillo, 2016

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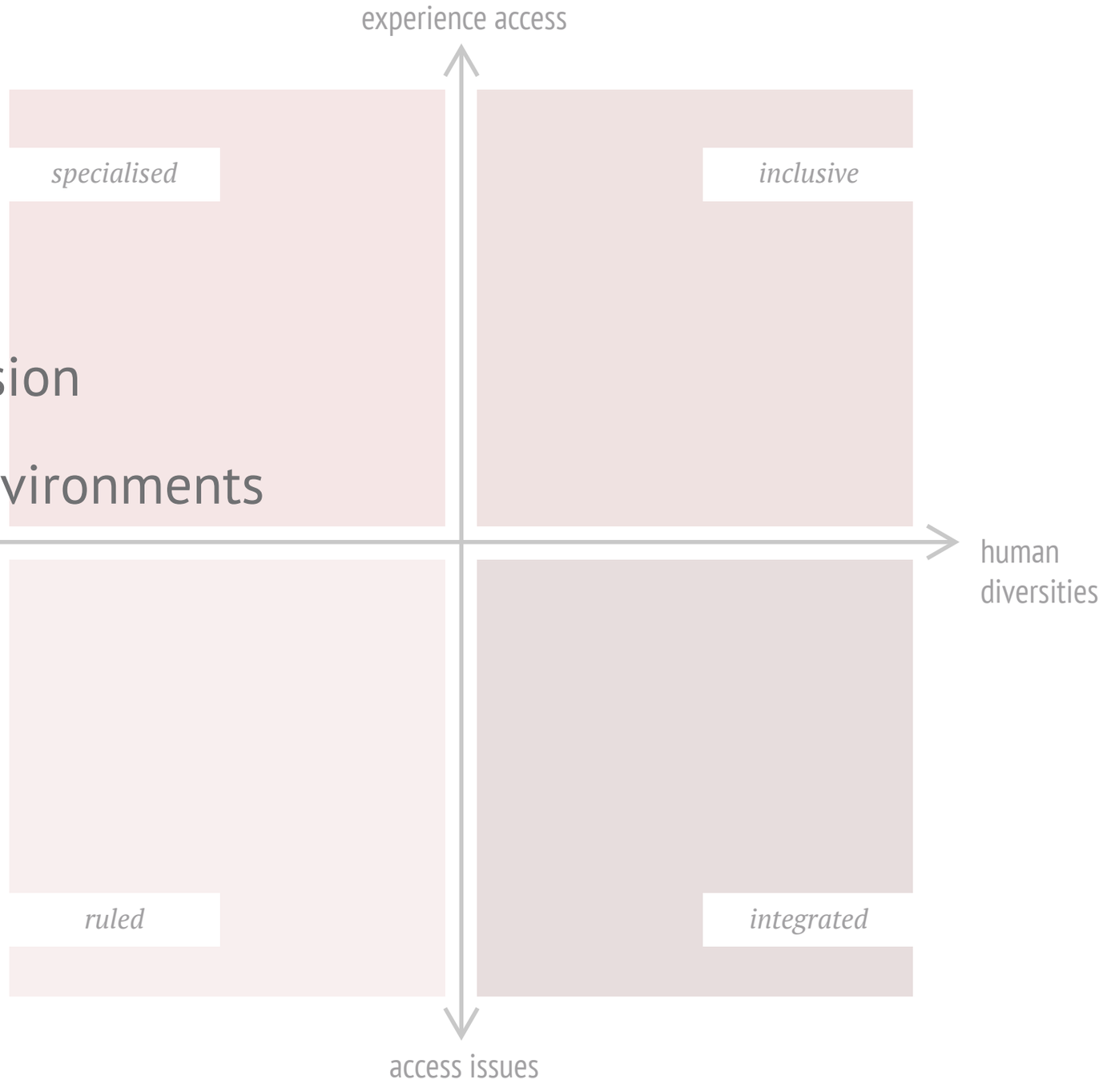

social integration *vs* social inclusion

accessible *vs* inclusive environments

access *vs* experience

Alexander, 1977
Petrillo, 2016

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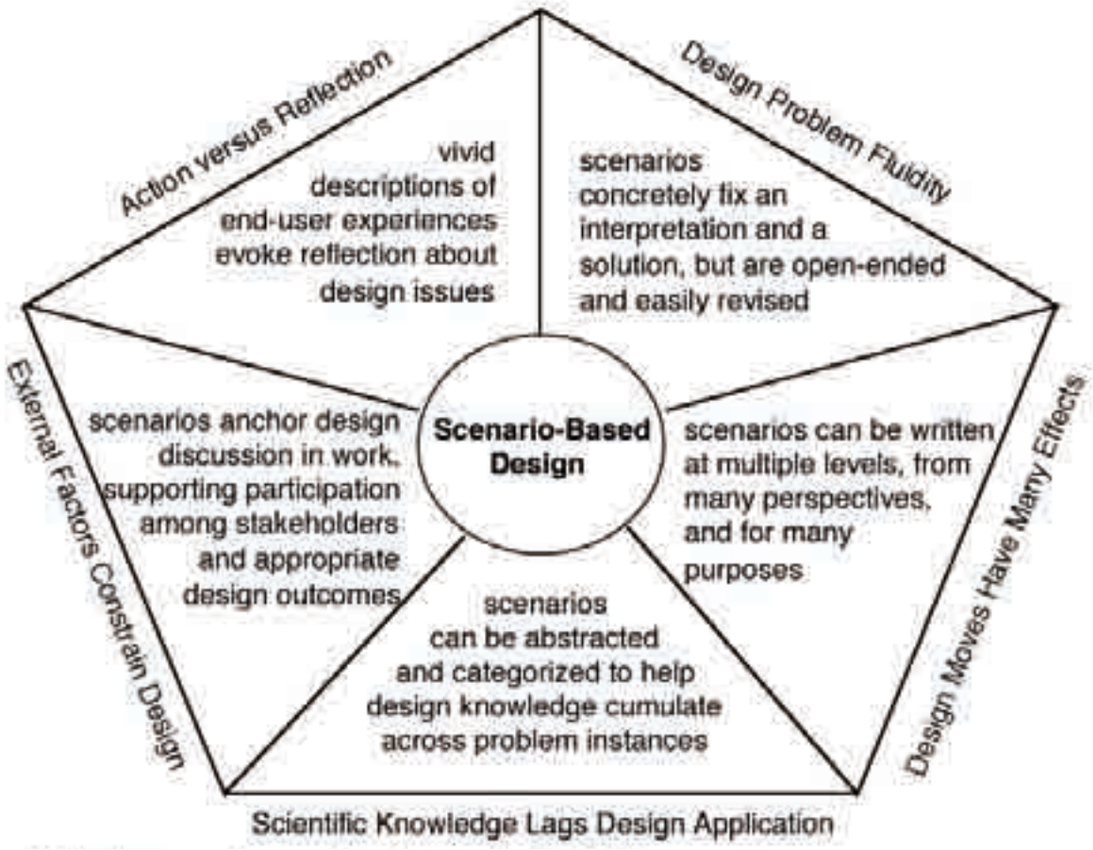
Theoretical framework



Carroll, 2000, 2002, 2004
Maschi, 2000
Manzini and Jegou, 2001

Scenario-based design changes the focus of design work from defining system operations to describing how people will use a system to accomplish work tasks and other activities.
Carroll, 2002

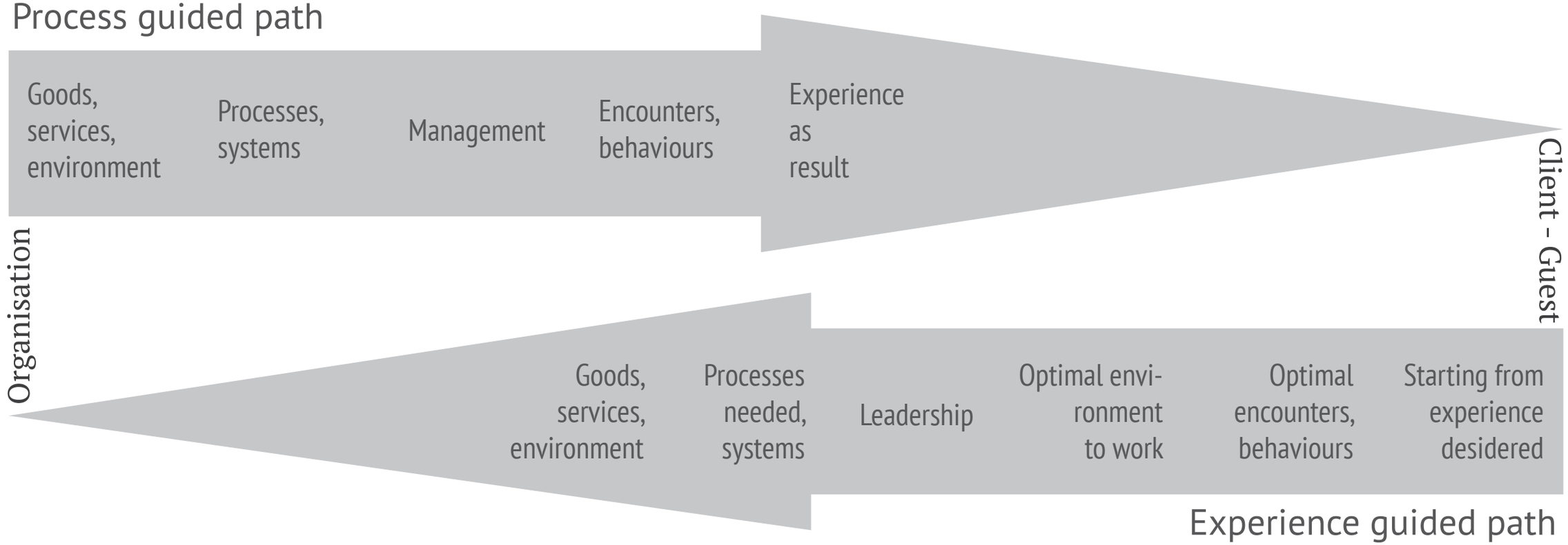
Scenarios anchor design discussion in the work to be supported, encouraging input and participation among all stakeholders. They serve as advance organizers to functional specifications.
Carroll, 2002

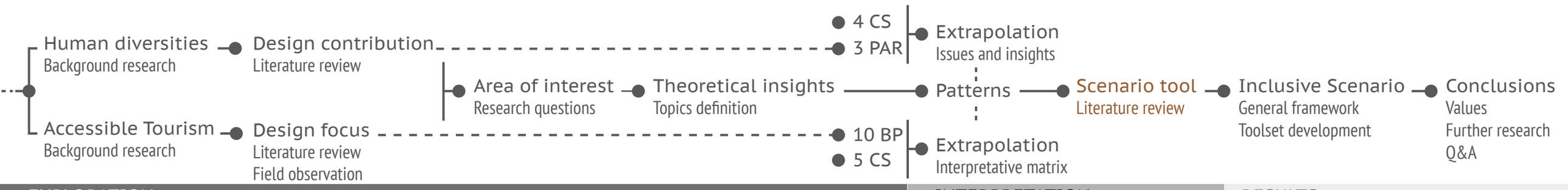
By vividly representing work activity, scenarios can help designers stay focused on end-user's activity and experience, and avoid confusing their preferences within those of the users.
Carroll, 2002

Inclusive scenario

General framework

Kotler et al., 2010
Cianfanelli, 2010
Scullica, 2008





Inclusive scenario

Toolset

ANALYSIS

User analysis
- Consumer behaviours
- Contextual observation
- Contextual inquiry
- Probes

Hospitality
- Mission
- Vision
- Concept design
- Definition of touristic offers
- Targeting

ENGAGE & MIX

Existing hotel?

NO

YES

DESIGN

Experience Scenario
- Customer Experience mapping
- Personas

System solutions
- Design brief space/product/service
- Design

VERIFY

Check Inclusiveness
- Check-lists

> The need is all centered on the answer;
> the desire on the question.
> *Fabris, 2009*

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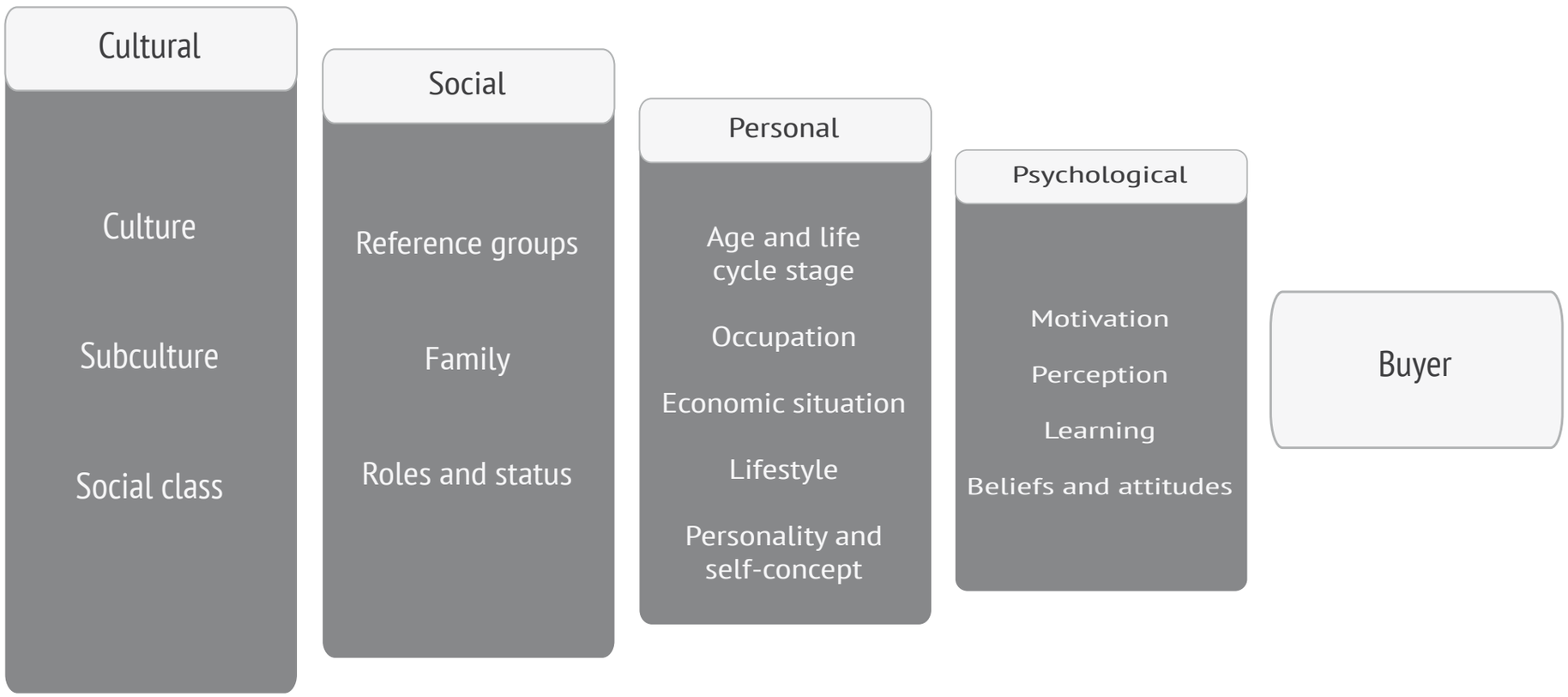
Inclusive scenario

Toolset

Scullica, 2008
Kotler et al., 2010
Tosi in Steffan, 2012



Consumers behaviours by Kotler et al., 2010

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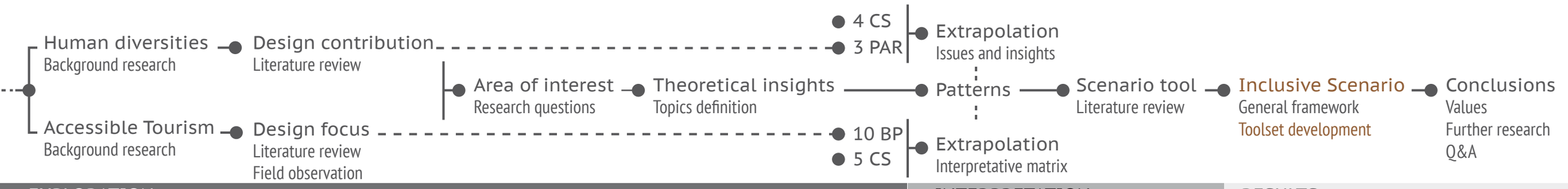


Inclusive scenario

Toolset

Kotler et al., 2010
Cianfanelli, 2010
Pine and Gilmore, 1999

Corporate strategic planning scheme by Kotler et al., 2010

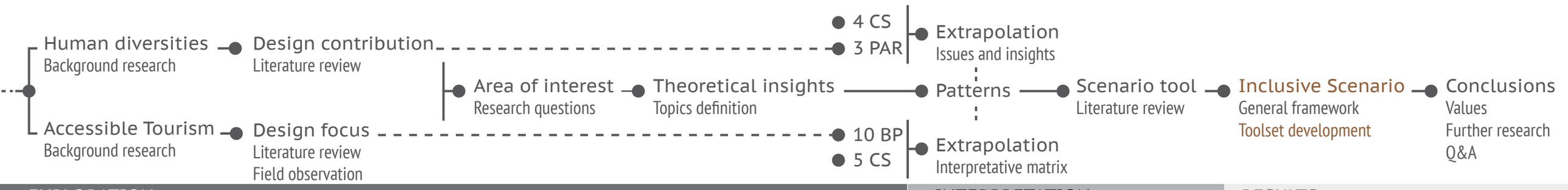
ANALYSIS

User analysis

- Consumer behaviours
- Contextual observation
- Contextual inquiry
- Probes

Hospitality

- Mission
- Vision
- Concept design
- Definition of touristic offers
- Targeting



Inclusive scenario

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Cianfanelli, 2010
Tkaczynski, 2009

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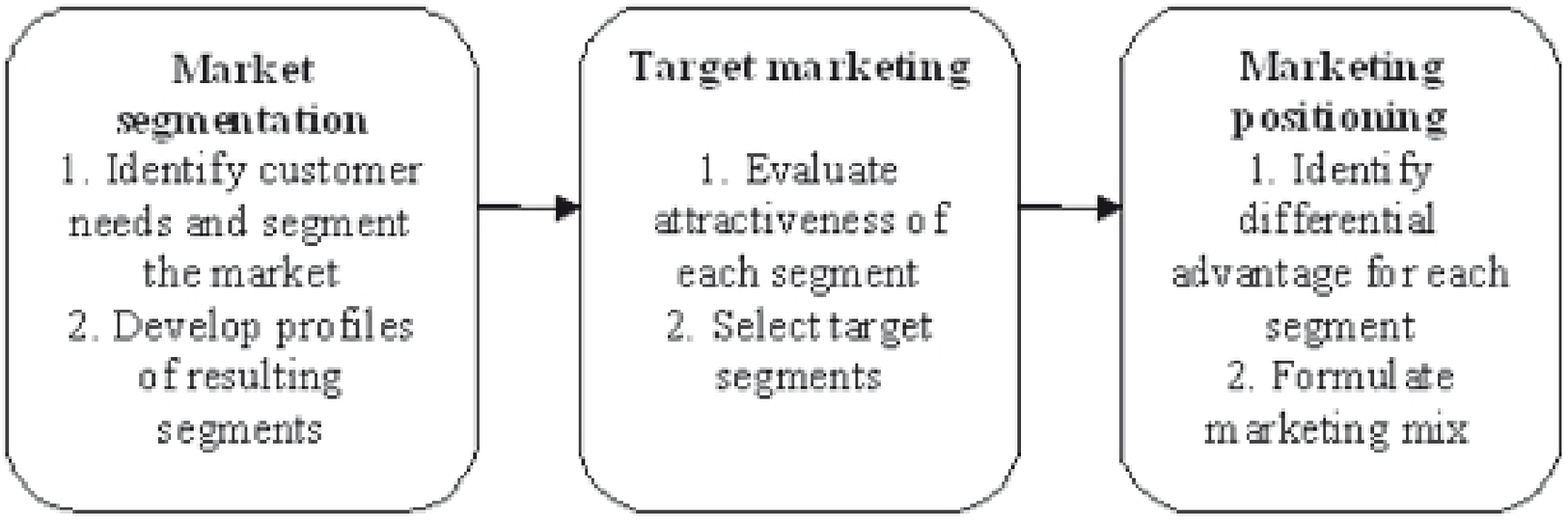
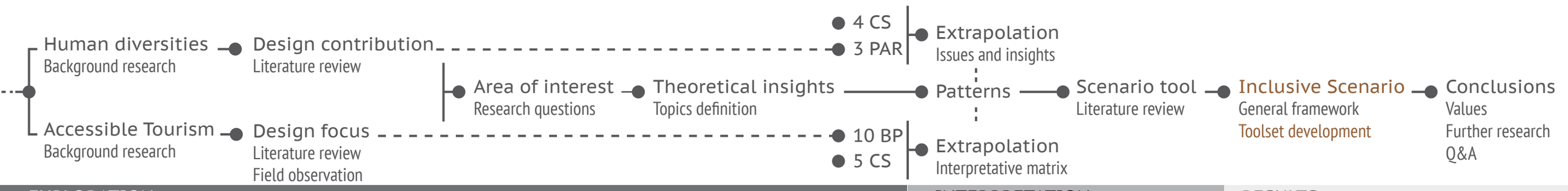


Segmentation process of consumer markets by Kotler et al., 2010



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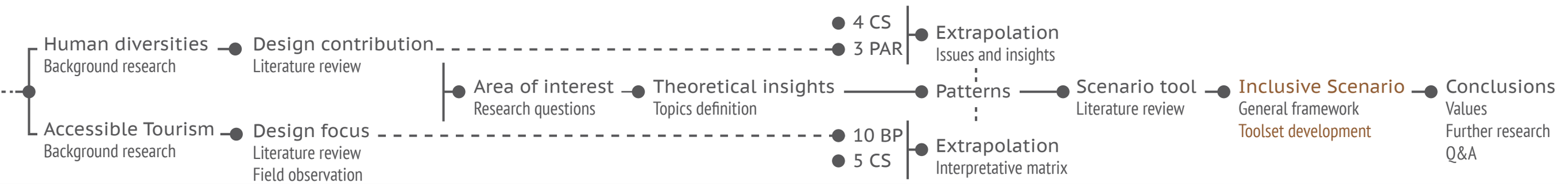


Inclusive scenario

Toolset

Frow and Payne, 2007
Cooper, 1999

ENGAGE & MIX

Existing hotel?

NO

YES

DESIGN

Experience Scenario

- Customer Experience mapping
- Personas

System solutions

- Design brief
  space/product/service
- Design

VERIF

Chec

- Check-l

Human diversities
Background research

Accessible Tourism
Background research

Design contribution
Literature review

Design focus
Literature review
Field observation

4 CS
3 PAR

10 BP
5 CS

Area of interest
Research questions

Theoretical insights
Topics definition

Extrapolation
Issues and insights

Patterns

Extrapolation
Interpretative matrix

Scenario tool
Literature review

Inclusive Scenario
General framework
Toolset development

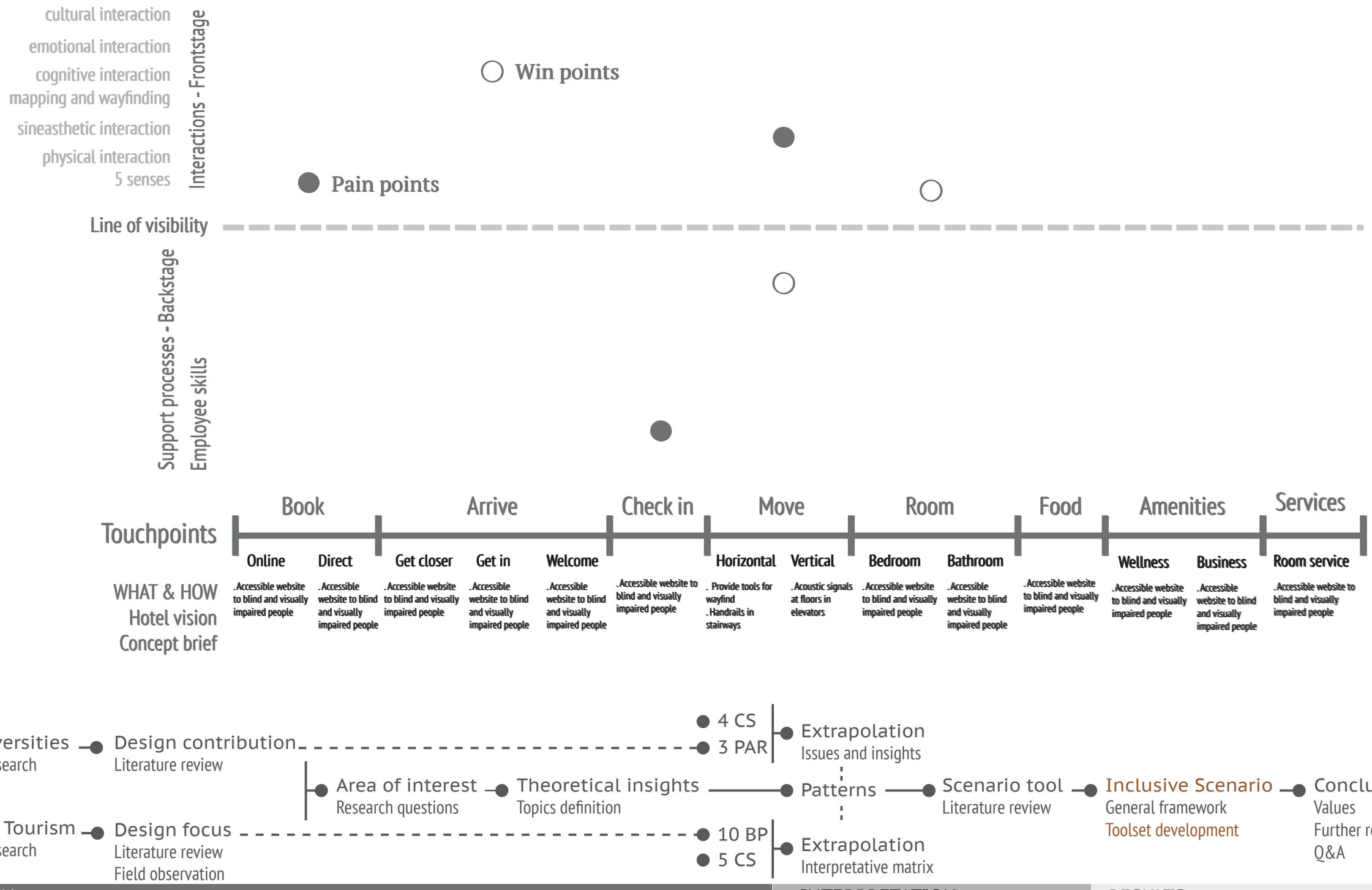
Conclusions
Values
Further research
Q&A

EXPLORATION | INTERPRETATION | RESULTS

Persona:
Persona:
Persona: Giovanni Bianchi
Purpose: Leisure
Social context: with girlfriend and 2 sons
Disability: Wheelchair user
Environ. Context: Night time Winter - Raining

Inclusive scenario

Toolset



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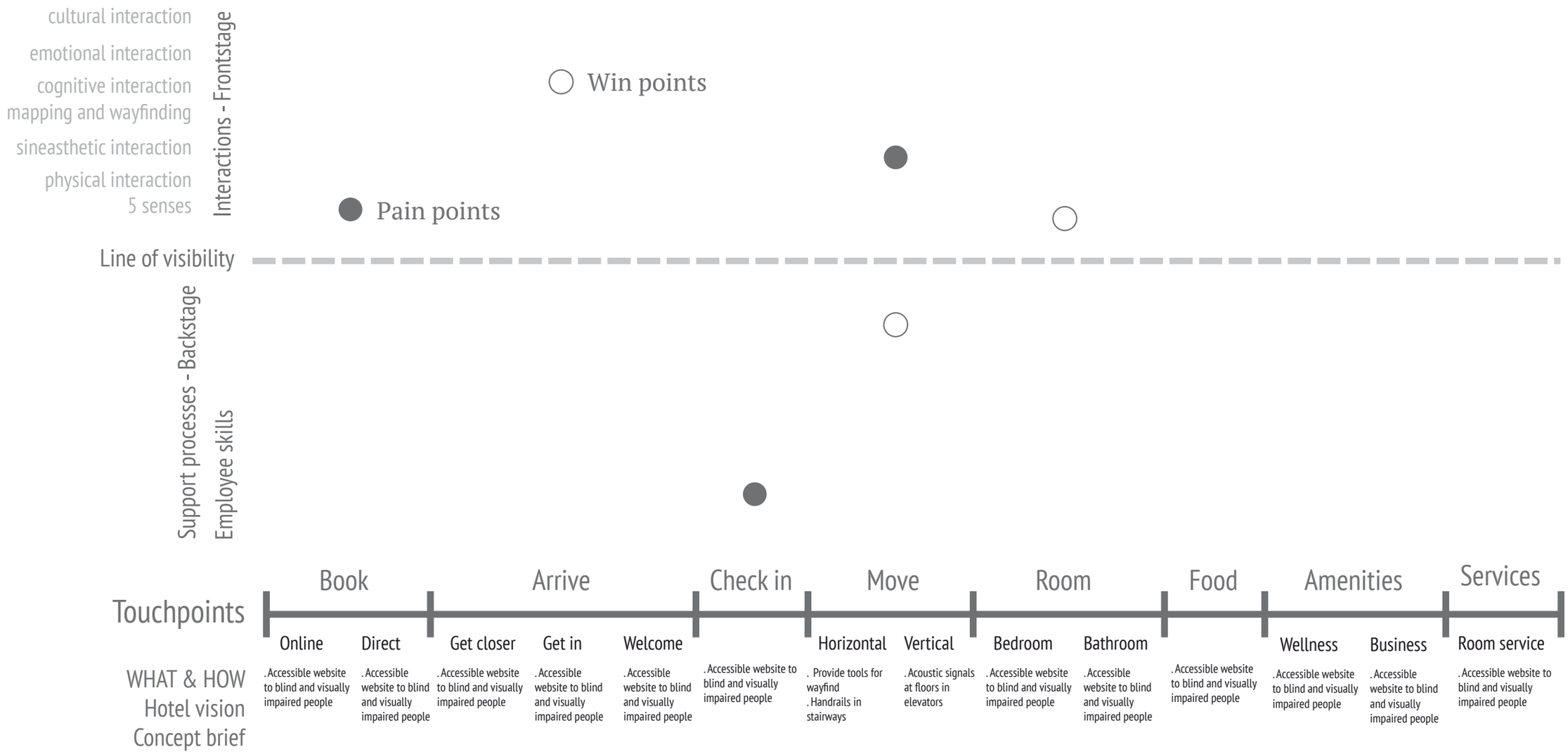

cultural interaction
emotional interaction
cognitive interaction
mapping and wayfinding
sineasthetic interaction
physical interaction
5 senses

Interactions - Frontstage

Win points

Pisano, 1987
Empler, 1997
Steffan, 2012

Pain points

Line of visibility

cultural interaction

emotional interaction

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Personal experience components

Support processes - Backstage

Employee skills

Touchpoints	Book		Arrive		Check in	Move		Roo
	Online	Direct	Get closer	Get in	Welcome	Horizontal	Vertical	Bedroom
WHAT & HOW Hotel vision Concept brief	. Accessible website to blind and visually impaired people	. Accessible website to blind and visually impaired people	. Accessible website to blind and visually impaired people	. Accessible website to blind and visually impaired people	. Accessible website to blind and visually impaired people	. Accessible website to blind and visually impaired people	. Provide tools for wayfind . Handrails in stairways	. Acoustic signals at floors in elevators	. Accessible website to blind and visually impaired people

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Book | Arrive | Check in | Move | Roo

Online | Direct | Get closer | Get in | Welcome | | Horizontal | Vertical | Bedroom

WHAT & HOW
Hotel vision
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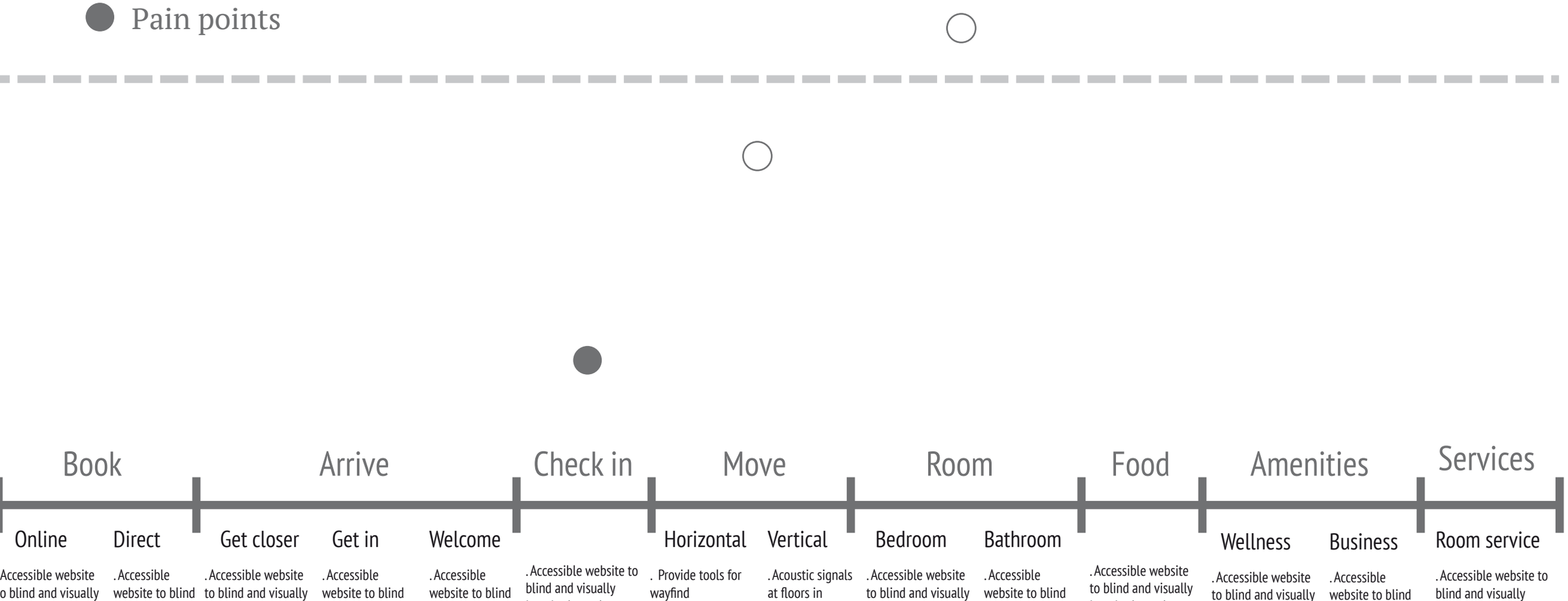

Inclusive scenario

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ENGAGE & MIX

Existing hotel?

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VERIFY

Check Inclusiveness

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EXPLORATION | INTERPRETATION | RESULTS

Designing hotel for all

Originality and values

Provide design tools that come from other Design area or disciplines.

Could be used in other fields and not only for PwD

Flexibility of use:
possibility to be used in its entirety or to use fewer tools, and in more or less extended way;

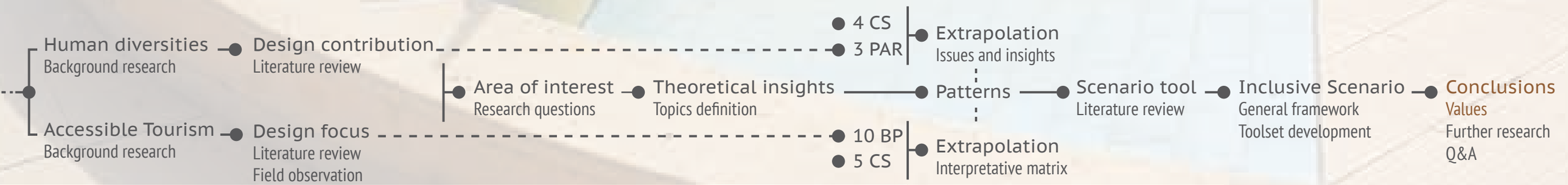
The Inclusive Scenario:

. changes the starting point of accessibility design.

. Wishes, wants and needs of PwD are in preliminary phases of design process, stating that human diversity is not an exception.

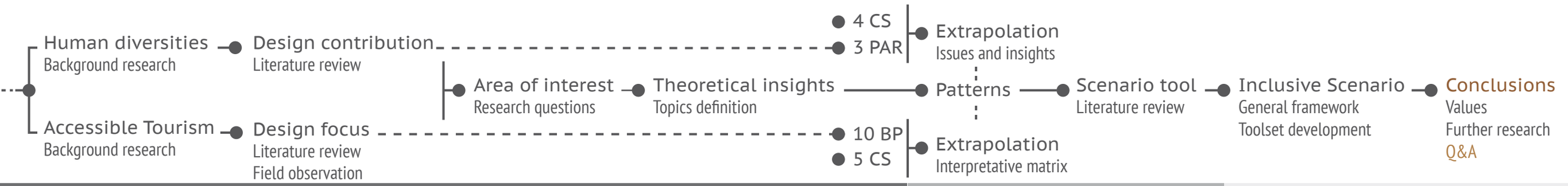
. are not used categories of PwD but user contextualised profiles.

. it is the mirror of the cognitive process that guests experience, and it is not only broughted the access issue.



CC BY NC ND

Designing hotel for all

from integration to inclusion

Thank you for your questions