VACCINE PASSPORT

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About Us

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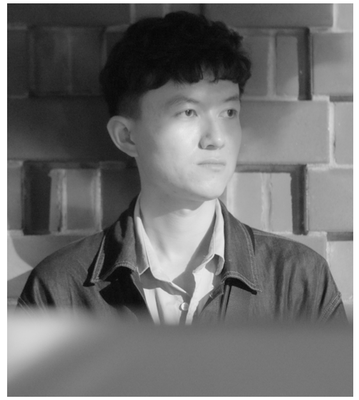

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Introduction

General Understanding

The Covid-19 pandemic claimed countless lives and created a local and **global emergency** situation.

As it is challenging to get the virus under control, countries imposed **security measures** to limit the spread of the virus. To protect each citizen and society as a whole, measurements like shutdowns, social distancing, and wearing masks are among the most effective and commonly adopted ones.

However, these **measures brought problems** like, for example, loneliness, financial hardships, the closure of shops with them.

A massive step towards **normality** and the reopening of society are **vaccinations**, which can ensure immunity for people worldwide.

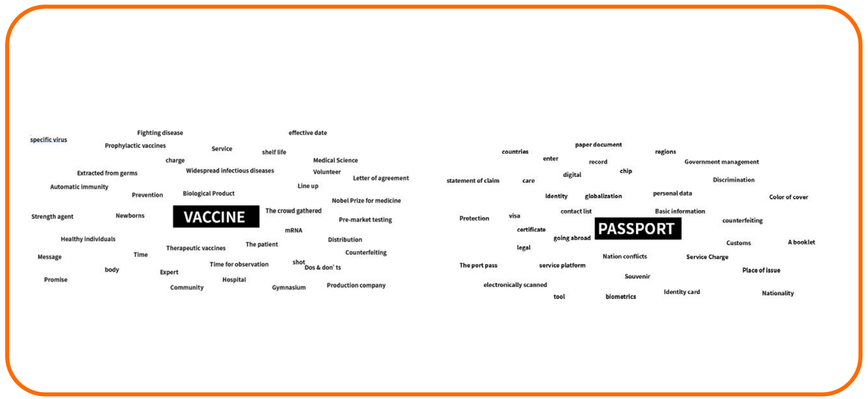
In order to **enable people** to carry out everyday activities and bringing back more flexibility to their lives, many countries have introduced **vaccine passports**.

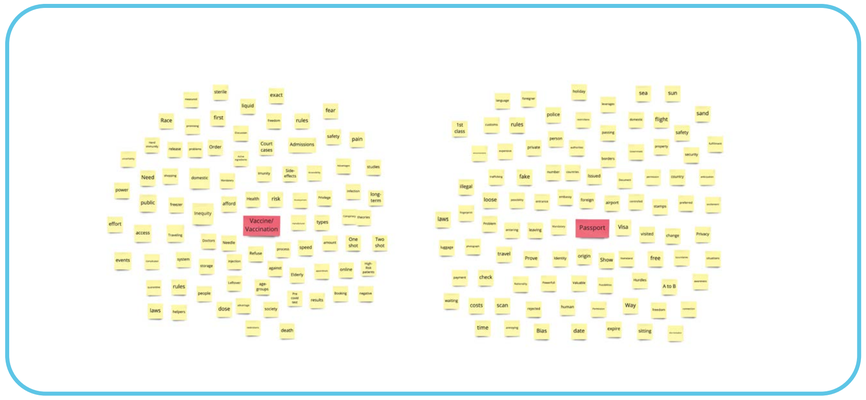
These vaccine passports can be an **opportunity** towards a normal life; it can help limit the spread of the virus further. At the same time, the application of vaccine passports also brings many **ambiguities** and **uncertainties** concerning privacy security, human rights, accessibility difference.

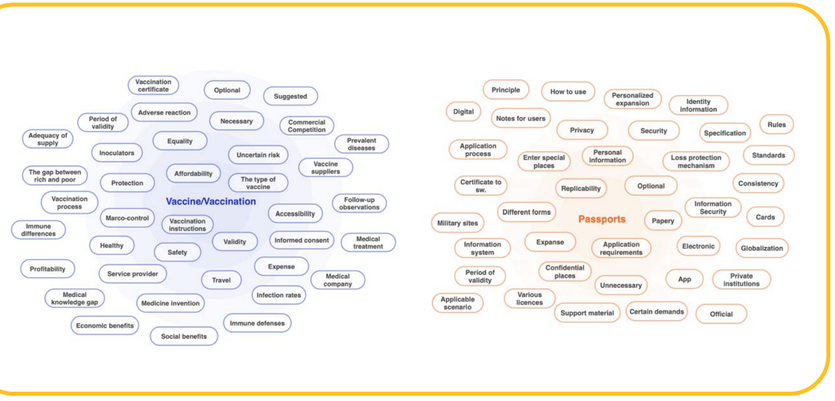
Definition

Exploration of the Concept

Creating individual brainstorming maps to find places of information.







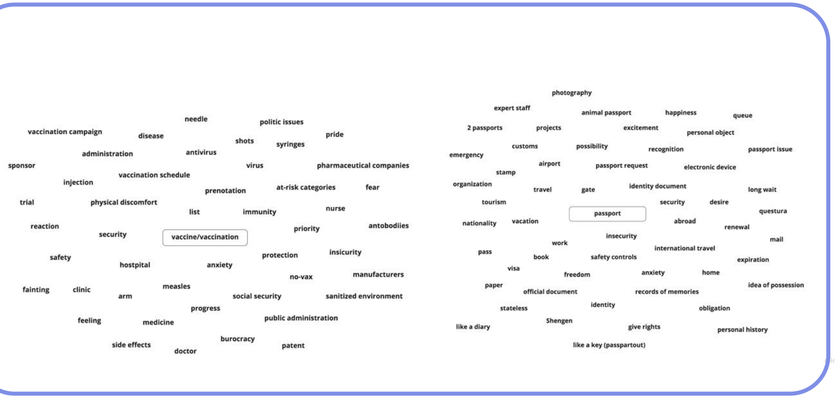


Figure 1: Brainstorming Map. Developed by Zhang Jing.

Figure 2: Brainstorming Map. Developed by Philipp Henzler.

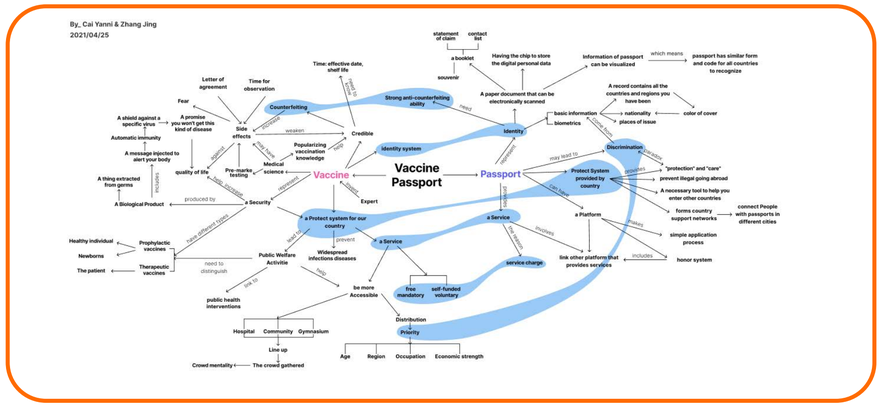
Figure 3: Brainstorming Map. Developed by Xingui Huang.

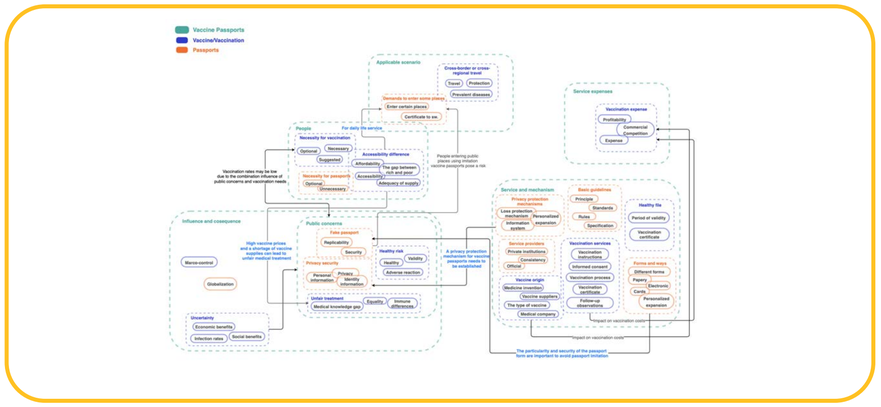
Figure 4: Brainstorming Map. Developed by Giorgia Ballabio.

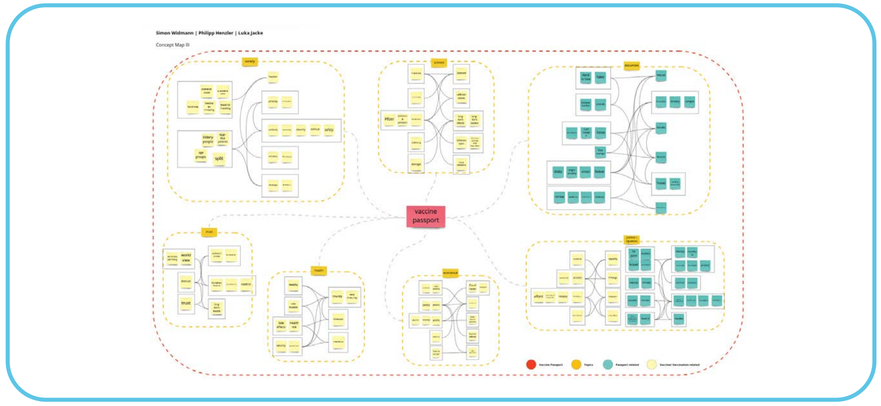
Definition

Exploration of the Concept

Creating concept maps to find interrelations between the places of information.







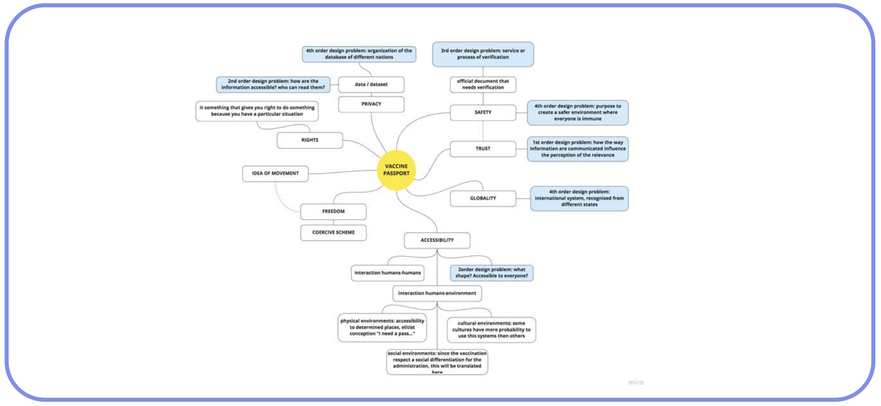


Figure 5: Complexity Map - Find interrelations between the places of information. Developed by Cai Yanni & Zhang Jing.

Figure 6: Complexity Map - Find interrelations between the places of information. Developed by Luka Jacke, Simon Widmann & Philipp Henzler.

Figure 7: Complexity Map - Find interrelations between the places of information. Developed by Xingui Huang.

Figure 8: Complexity Map - Find interrelations between the places of information. Developed by Giorgia Ballabio .

Definition

Insights

Find patterns from each individual work of recurrent places of information.

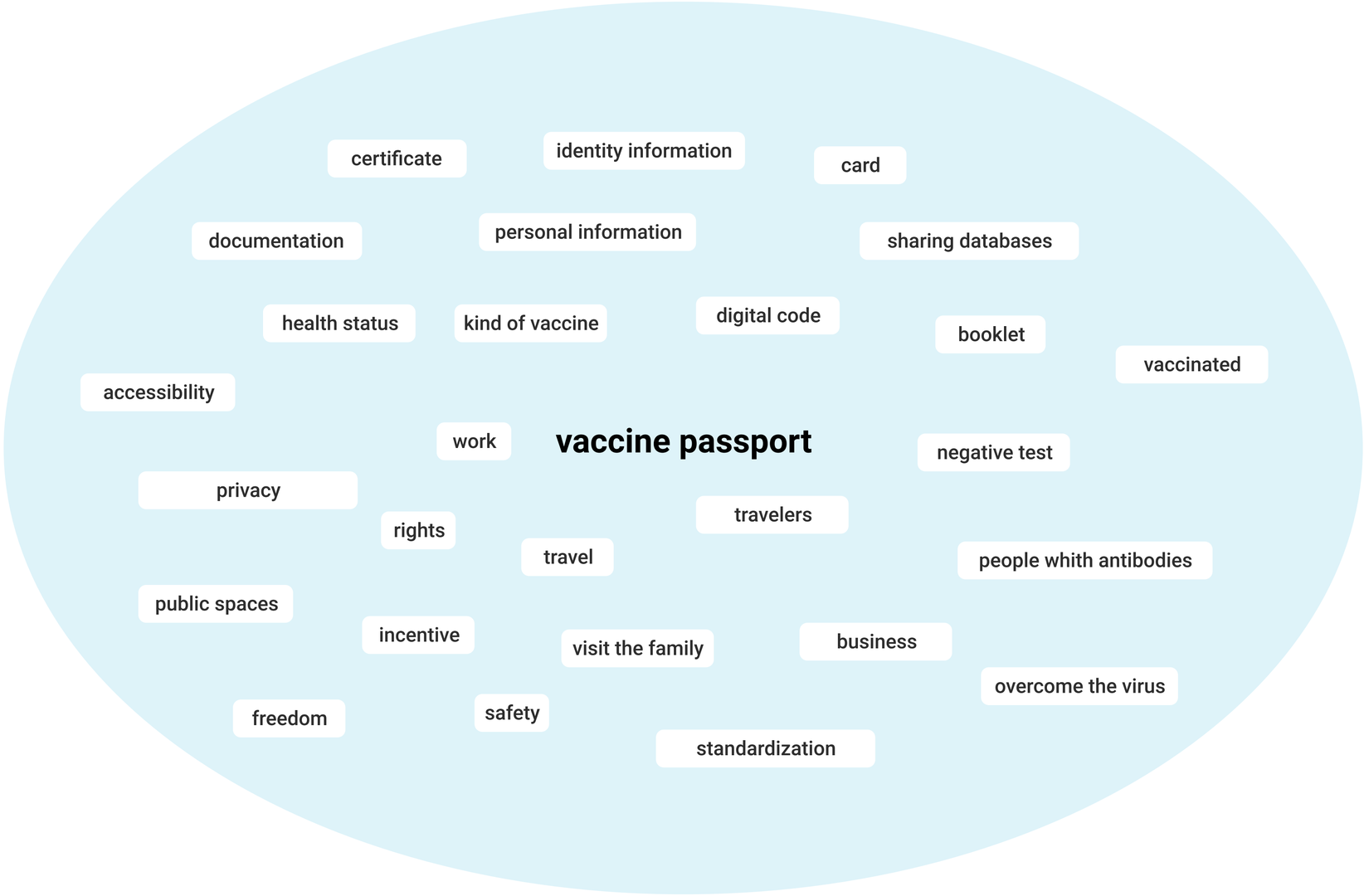
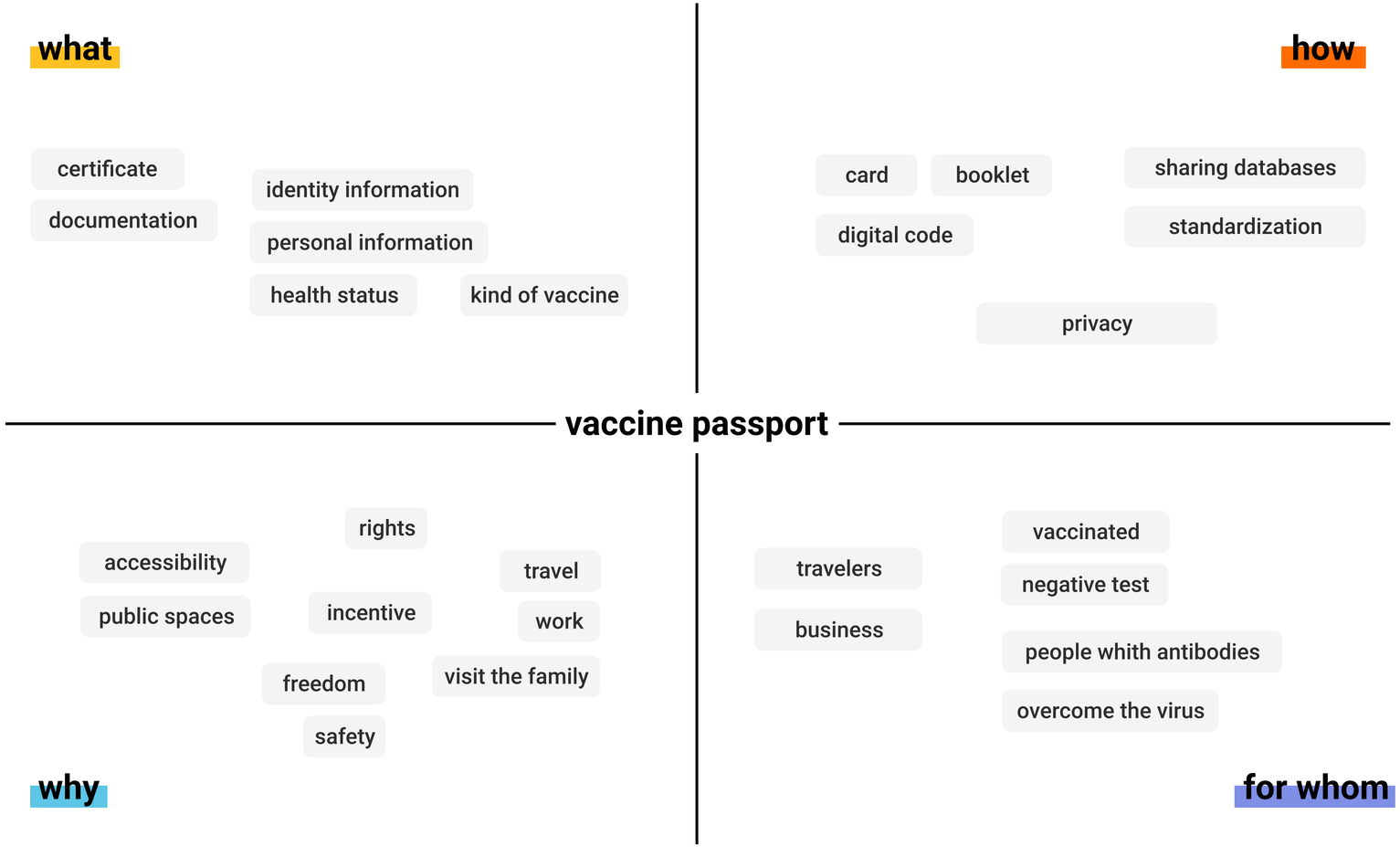


Figure 9: Definition Insights. Developed by Zhang Jing, Giorgia Ballabio, Xingui Huang, Philipp Henzler.

Preliminary Definition

Exploration of the Concept



A vaccine passport is a **tangible and/or intangible certificate** containing the **current health status related to COVID-19** (vaccinated, negative test or overcome the infection) and **personal/identity information** that **allows** an **individual citizen of a country**, to **have access to spaces** where it is required.

Figure 10: Exploration of the Concept. Developed by Zhang Jing, Giorgia Ballabio, Xingui Huang, Philipp Henzler.

Preliminary Definition

Exploration Different Sources

what how why for whom

Generally, people are using the term to mean an electronic record of vaccination, possibly in the form of a QR code, that is easily accessible through a smartphone or possibly stored on the device, though it could also be printed out.
New York Times link

It is a document attesting that its bearer is immune to a contagious disease.
Wikipedia link

The Green Pass is an entry permit to places or facilities for recovered coronavirus patients and vaccinated people.
Ministry of health, Israel link

A vaccination certificate is given to people who receive a second dose and will take effect one week after for six months. People who have the certificate are exempt of isolation, so it is recommended that you have it before international travel.
Ministry of health, Israel link

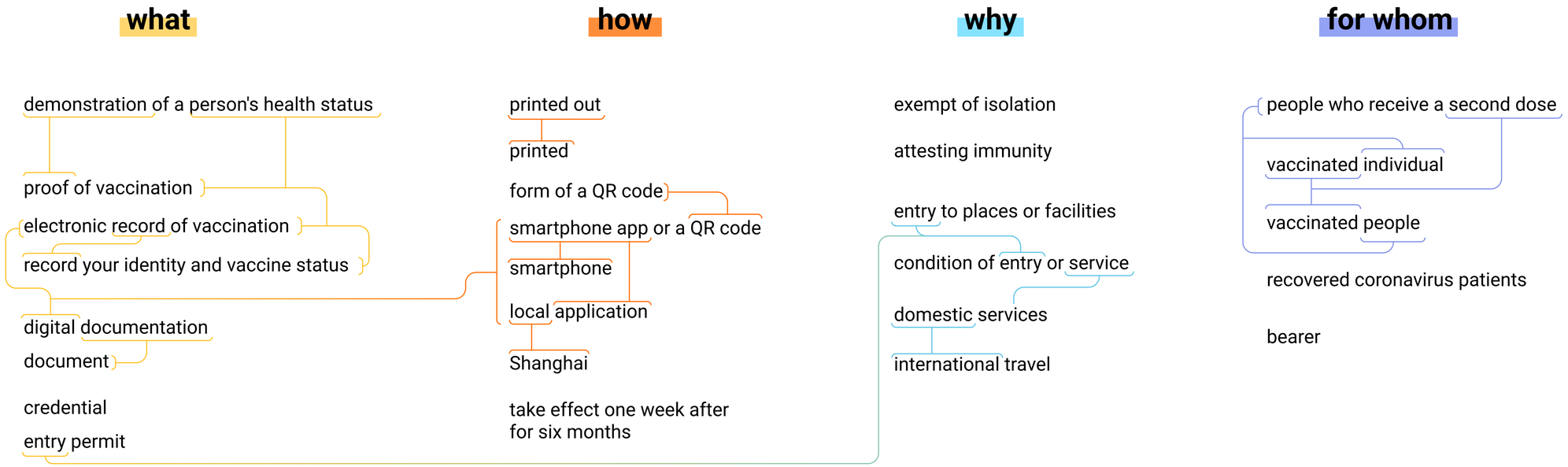
A vaccine passport is proof of vaccination that may be required as a condition of entry or service. It is digital documentation that an individual has been vaccinated against a virus, in this case, COVID. Most commonly, this is considered for international travel, but certain domestic services are also discussed.
Wego link

It's a credential that can be used to show that a person has been vaccinated. The same technology can be used to show a person's coronavirus test results. It's a way to demonstrate a person's health status, generally through a smartphone app or a QR code that has been printed.
Wego link

“随申 ” is a local application in Shanghai, it will determine whether you are allowed to the public space, and also record your identity and vaccine status.
missed link

Preliminary Definition

Explore Different Sources

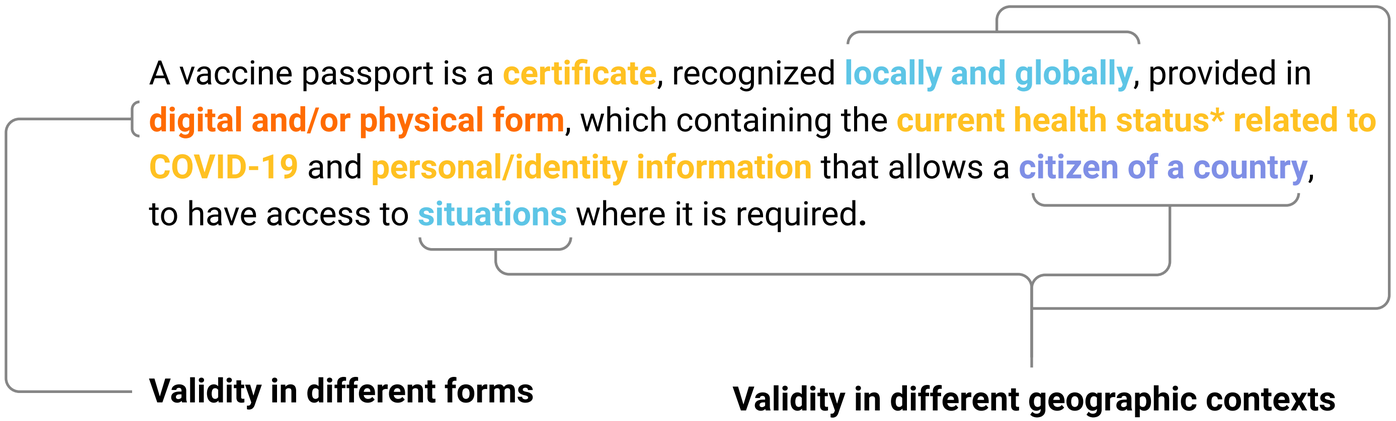


 # What form might be the most scalable or accessible?
 # What might the distinction between local and international use look like?
 # Should there be these distinctions?

 # What might be the consequences of these distinctions in form and use?
 # What might be the biggest limitations in terms of accessibility and scalability?

Our Definition

Final Version



* the *current health status related to COVID-19* can include different informations: if the person has received the vaccination, a negative test or if he/she has overcome the infection.

Our Definition

Final Version

A vaccine passport is a **certificate**, recognized **locally and globally**, provided in **digital and/or physical form**, which containing the **current health status related to COVID-19*** and **personal/identity information** that allows a **citizen of a country**, to have access to **situations** where it is required**.**

* the *current health status related to COVID-19* can include different informations: if the person has received the vaccination, a negative test or if he/she has overcome the infection.

Design Challenge

Our Interpretation

How could the **idea** and use of a **vaccine passport** as a **certificate of proof of vaccination** be a **positive experience**, where people with great **confidence without anxiety and fear** of using it are able to **create fulfilled experiences**?

-Given by Professor Kaja Tooming Buchanan

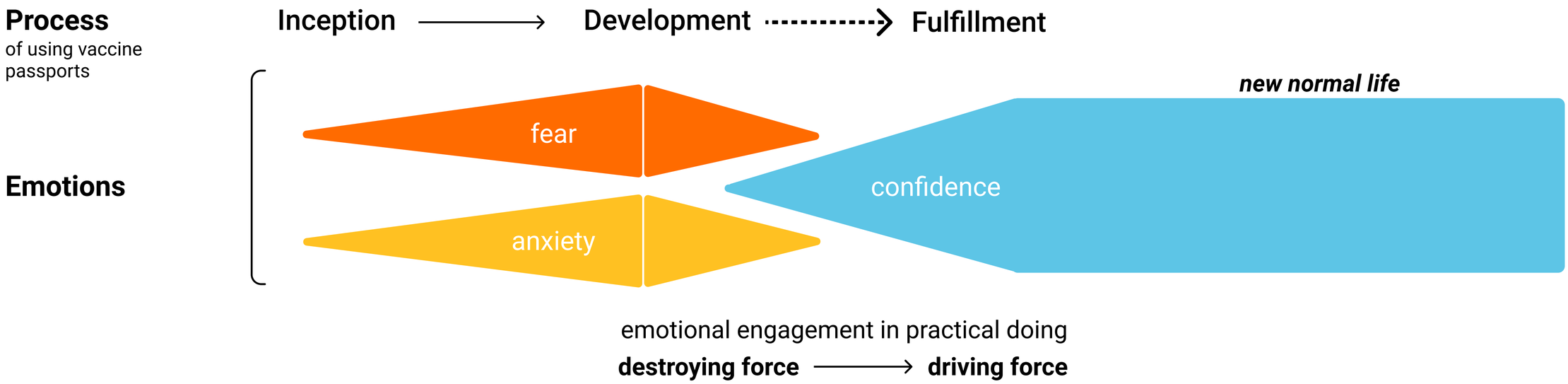


Figure 11: Process of using Vaccine Passport. Developed by Zhang Jing, Giorgia Ballabio, Xingui Huang, Philipp Henzler. Based on Designchallenge given by Profesor Kaja Tooming Buchanan.

General Purpose

To explore how **standardizations of the vaccine passport system** are related to different **local and global situations** in order to reach a **fulfilled experience** without **fear and anxiety** for the holders.

Methods

Process to Identify the Problem Statement

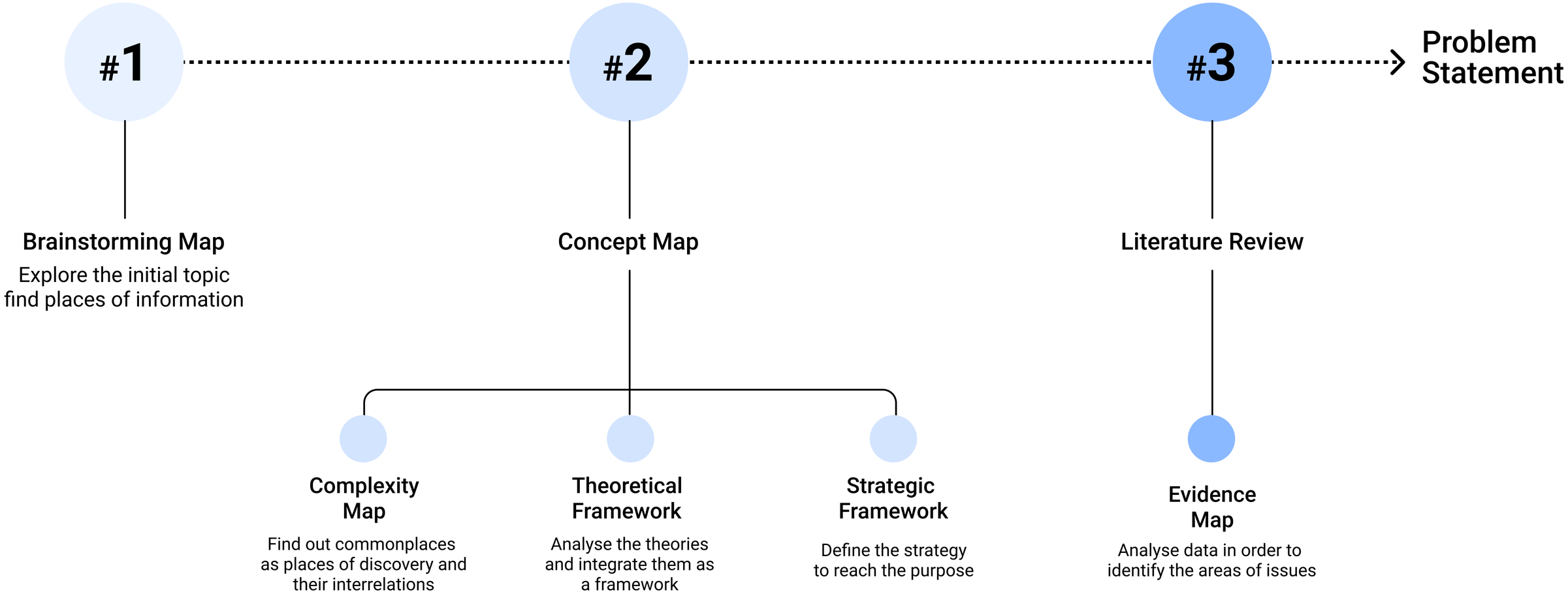


Figure 12: Methods - Process to Identify the Problem Statement. Developed by Zhang Jing, Giorgia Ballabio, Xingui Huang, Philipp Henzler.

Concept Map

Commonplaces as Places of Discovery

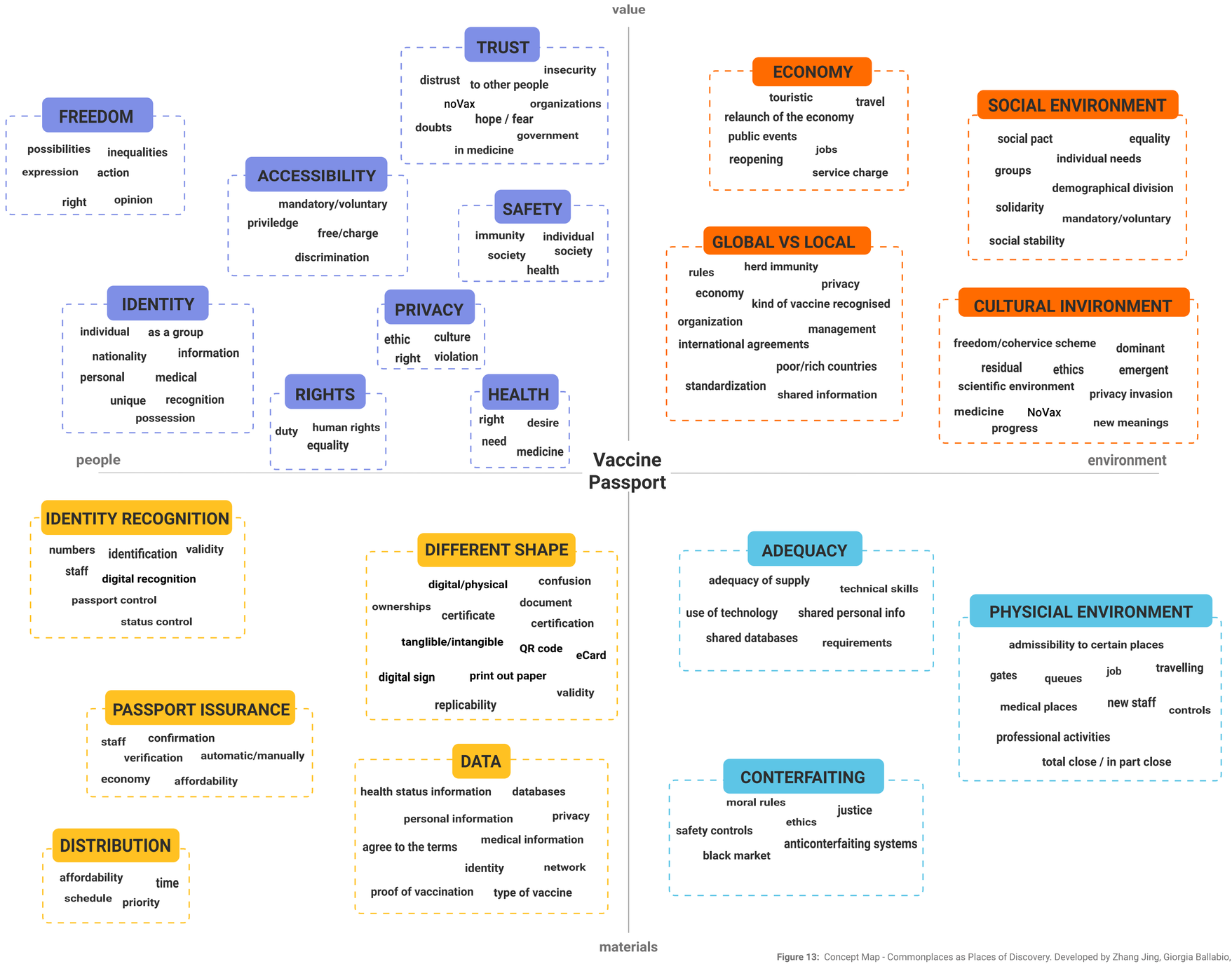


Figure 13: Concept Map - Commonplaces as Places of Discovery. Developed by Zhang Jing, Giorgia Ballabio, Xingui Huang, Philipp Henzler.

Concept Map

Interrelations Between Places of Discovery

Insights:

Global vs local is the one with the highest number of interrelations

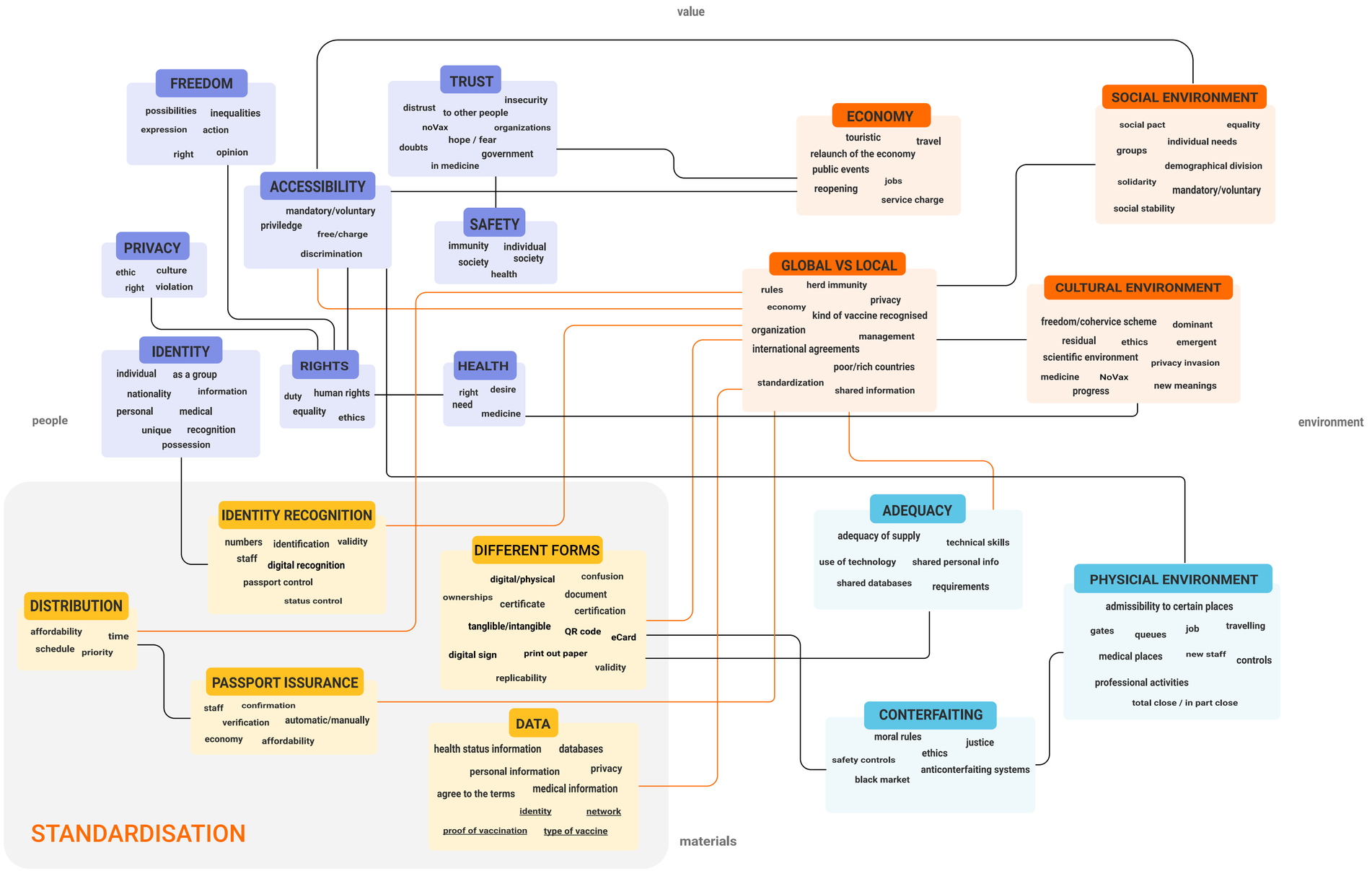


Figure 14: Concept Map - Interrelations Between Places of Discovery. Developed by Zhang Jing, Giorgia Ballabio, Xingui Huang, Philipp Henzler.

Concept Map

Interpretation of Commonplaces

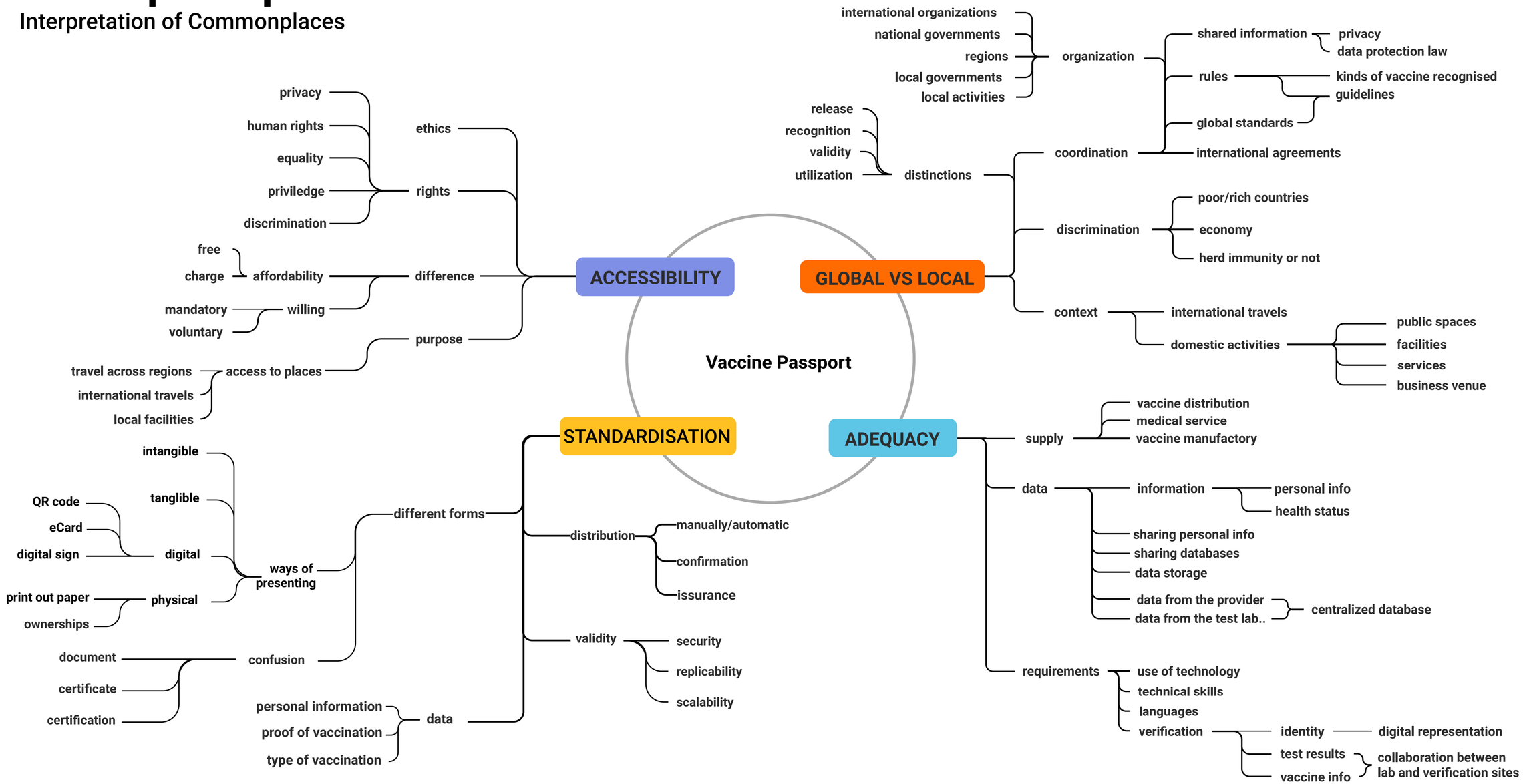


Figure 15: Concept Map - Interpretation of Commonplaces. Developed by Zhang Jing, Giorgia Ballabio, Xingui Huang, Philipp Henzler.

Theories

Theories Used

Culture

Geographic contexts (global, local, contexts,...)

William, DOMINANT, RESIDUAL, and EMERGENT

Whitbeck, ETHICS IN ENGINEERING PRACTICE AND RESEARCH-INTRODUCTION TO ETHICAL CONCEPTS

value

Interaction

Holders, use (adequacy, sharing,...)

Goffman, FACIAL ENGAGEMENT

people — **Vaccine passports** — environment

Experience

Fulfilled experience (accessibility, purpose...)

Dewey, HAVING AN EXPERIENCE

Richard Buchanan, FOUR ORDERS OF DESIGN

materials

Emotion

Fear, anxiety (standardizations, confusion...)

Spinoza, ETHICS

Figure 16: Map of Theories - Theories Used. Developed by Zhang Jing, Giorgia Ballabio, Xingui Huang, Philipp Henzler. Based on Theories from John Dewey, Erving Goffman, Spinoza, Richard Buchanan, Raymond Williams and Caroline Whitbeck

Theoretical Framework

Basic Framework

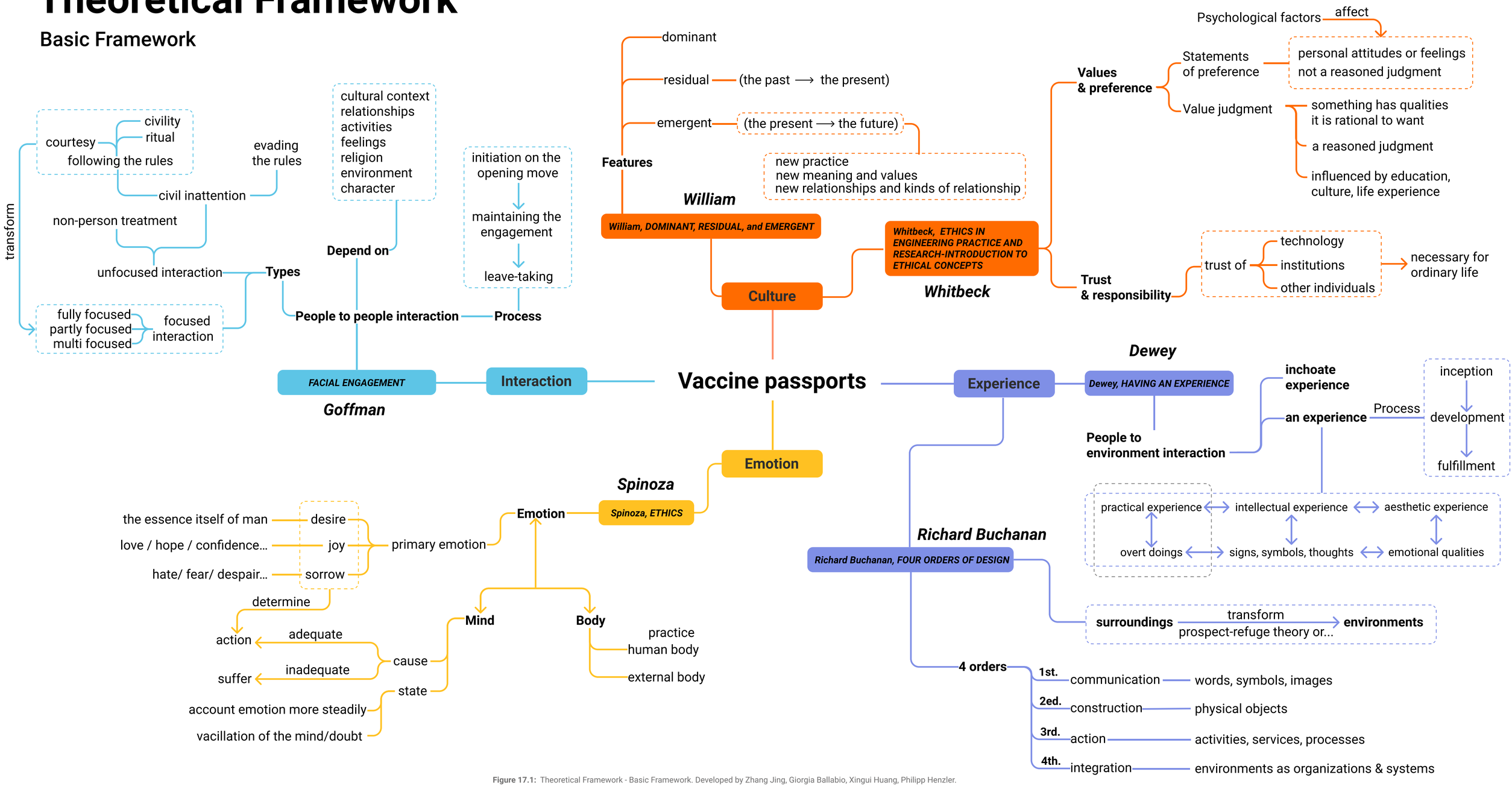


Figure 17.1: Theoretical Framework - Basic Framework. Developed by Zhang Jing, Giorgia Ballabio, Xingui Huang, Philipp Henzler.
Based on Theories from John Dewey, Erving Goffman, Spinoza, Richard Buchanan, Raymond Williams and Caroline Whitbeck

Theoretical Framework

Connections Between Theories

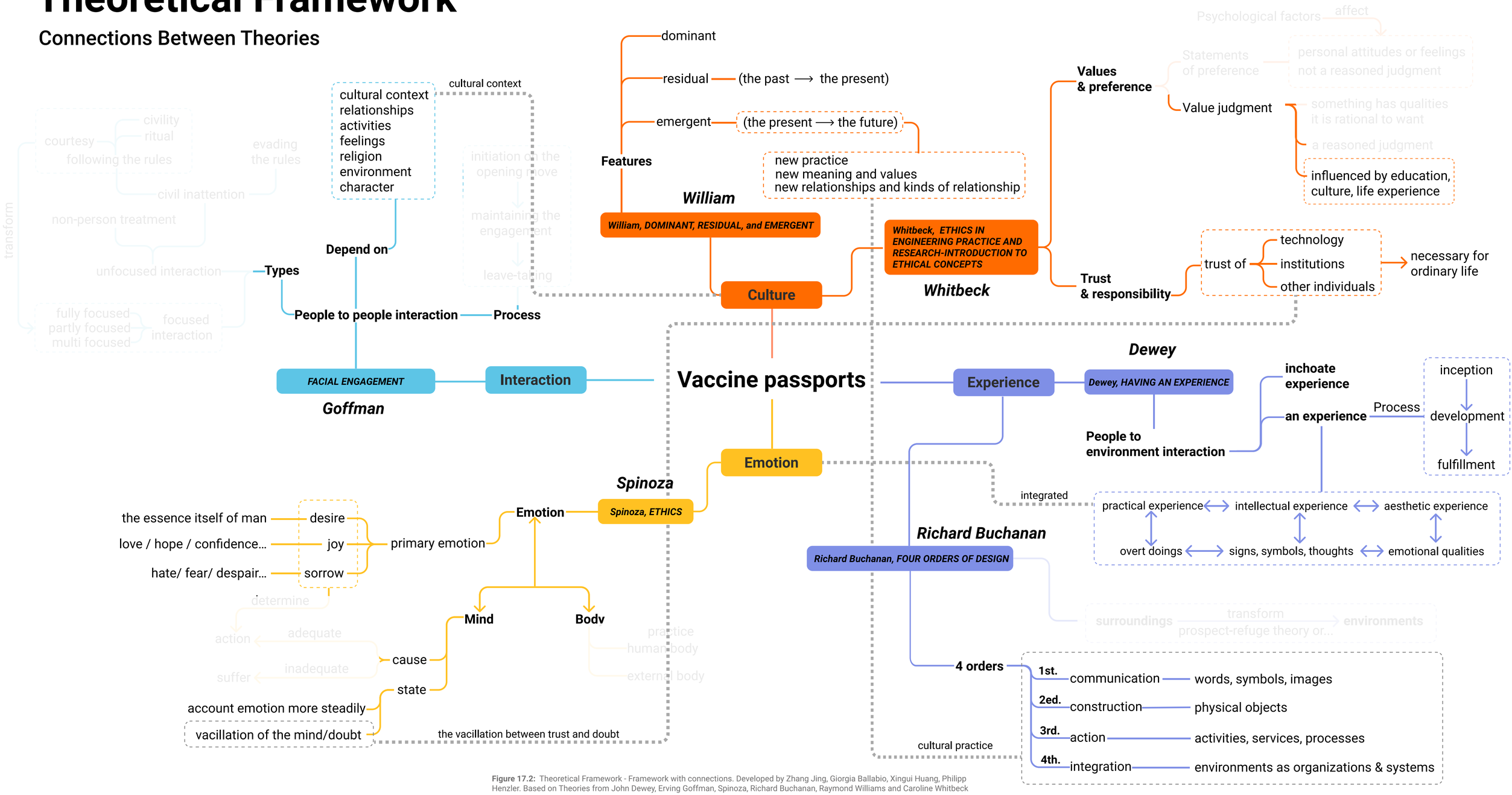


Figure 17.2: Theoretical Framework - Framework with connections. Developed by Zhang Jing, Giorgia Ballabio, Xingui Huang, Philipp Henzler. Based on Theories from John Dewey, Erving Goffman, Spinoza, Richard Buchanan, Raymond Williams and Caroline Whitbeck

Theoretical Framework

Focused Theories

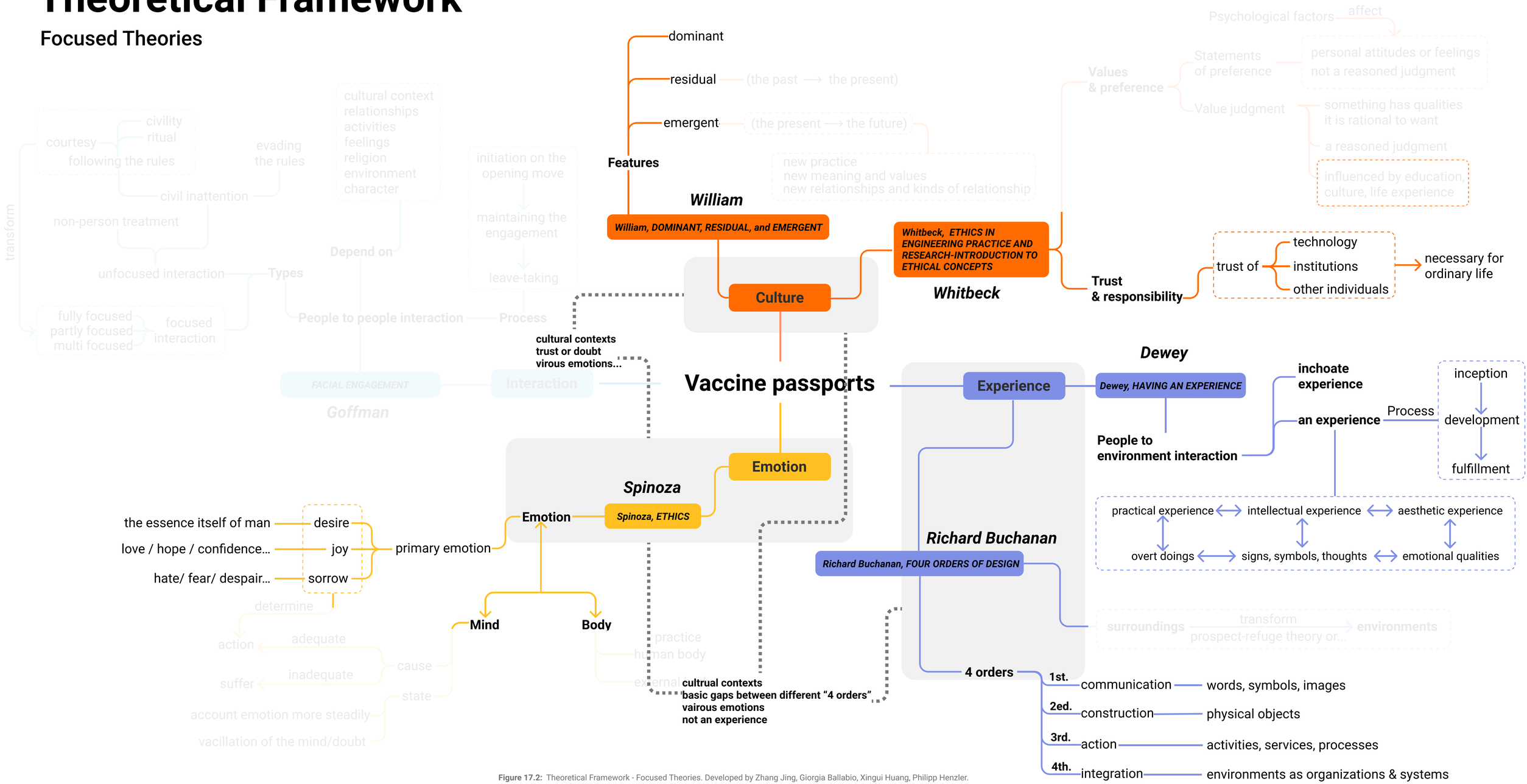
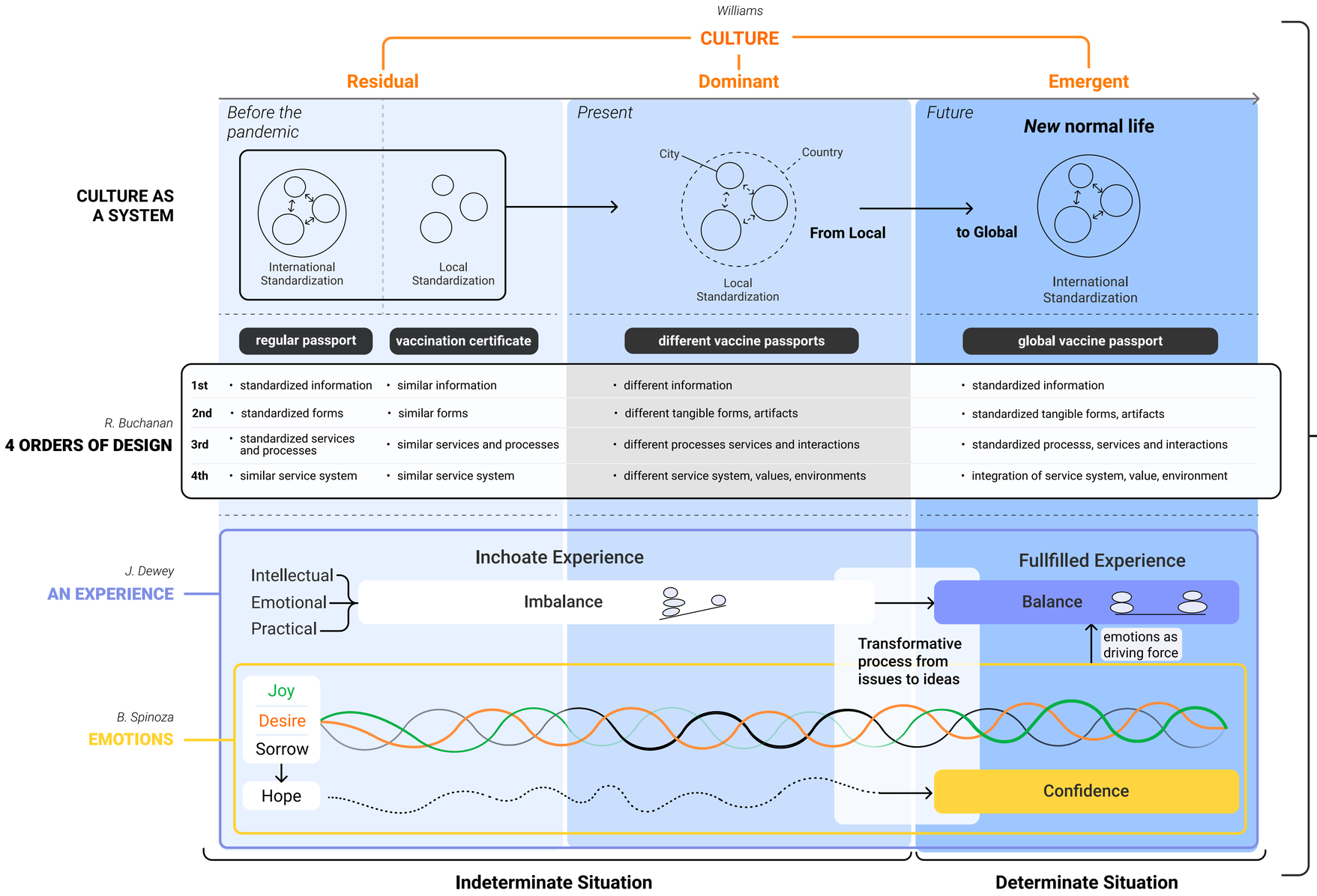


Figure 17.2: Theoretical Framework - Focused Theories. Developed by Zhang Jing, Giorgia Ballabio, Xingui Huang, Philipp Henzler. Based on Theories from John Dewey, Erving Goffman, Spinoza, Richard Buchanan, Raymond Williams and Caroline Whitbeck

Strategic Framework



Based On Our Purpose

To explore how **standardizations of the vaccine passport system** are related to different **local and global situations** in order to create a **fulfilled experience** without **fear and anxiety** for the holders.

Figure 18: Strategic Framework. Developed by Zhang Jing, Giorgia Ballabio, Xingui Huang, Philipp Henzler. Based on Theories from John Dewey, Spinoza, Richard Buchanan, Raymond Williams and Caroline Whitbeck

User Profiles

Local — National — Global

Primary User

Uses it Locally

Age Range:
18 - 70 Years Old

Gender:
Female, Male

Nationality:
Chinese

Economic Status:
Middle income level; high income level

Motivation:
Daily life activities, acces to facilities or local services

Information Need to Be Checked:
Whether the destination needs vaccine passport or not

Main Activities:
Research for the destination requirements;
bring the vaccine passport;
show vaccine passport

Attidues:
Confident in using it, more confident in its validity, responsible and sympathetic

Secondary User

Uses It to Travel to a Next Province

Age Range:
18 - 70 Years Old

Gender:
Female, Male

Nationality:
Chinese

Economic Status:
Middle income level; high income level

Motivation:
Short-distance travels, travel to another region in the same countryoccasional activities, business

Information Need to Be Checked:
Whether the destination needs vaccine passport or not;
what kind of vaccine passport it needs;
what ways of data treatment

Main Activities:
Research for the destination requirements;
check the validity of the vaccine passport owned;
request the right version if the owned one is not valid;
carry the vaccine passport; show it

Attitudes:
If the vaccine passport owned is not valid the user is less confident in using it, less confident in its validity, annoyed because he/she has to request a new one.
If the vaccine passport owned is already valid the user is confident, happy, relaxed

Tertiary User

Uses It to Travel to Another Country

Age Range:
18 - 70 Years Old

Gender:
Female, Male

Nationality:
Chinese

Economic Status:
Middle income level; high income level

Motivation:
Long-distance travels, travels to another country, occasional activities, business

Information Need to Be Checked:
Whether the destination needs vaccine passport or not;
what kind of vaccine passport it needs;
what ways of data treatment;
what kind of vaccine required; request of negative test

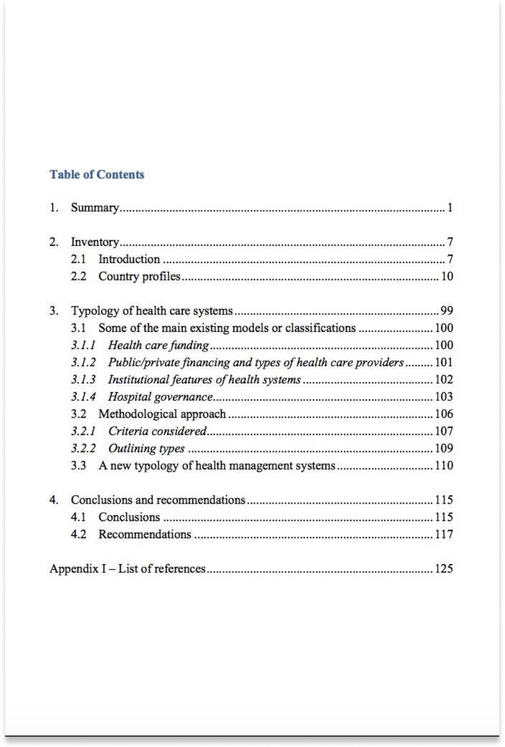
Main Activities:
Research for the destination requirements; check the validity of the one owned; check the different requirement if the owned one is not valid; request the local version; apply to local vaccine passport; bring the vaccine passport; show the vaccine passport;

Attitudes:
If the vaccine passport owned is not valid the user is least confident in using it, least confident in its validity, annoyed and afraid;
stressed since he/she has to require a new vaccine passport.
If the validity of the vaccine passport he/she owns is recognised he/she is confident in using it, happy, relaxed, enthusiastic.

Sources of Evidences

Secondary Sources

Excelsior pass, FAQ
Vaccine passports -- A technical, not an ideological issue
International monitor: vaccine passports and COVID status apps
Coronavirus: Commission proposes a Digital Green Certificate
Arriva il passaporto Covid europeo: così cambiano i viaggi in UE
The management of health system in EU link
QUI COMO link
IATA Unveils Key Design Elements of IATA Travel Pass



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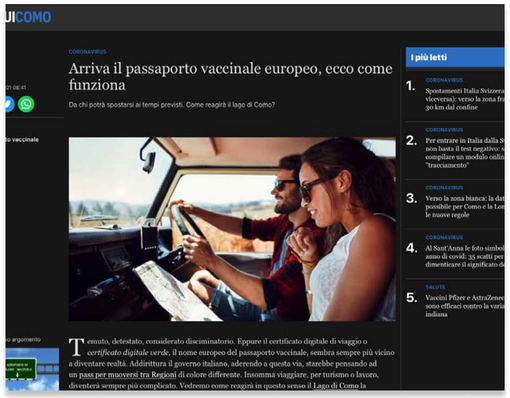
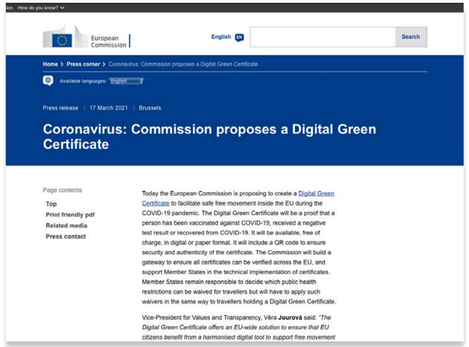
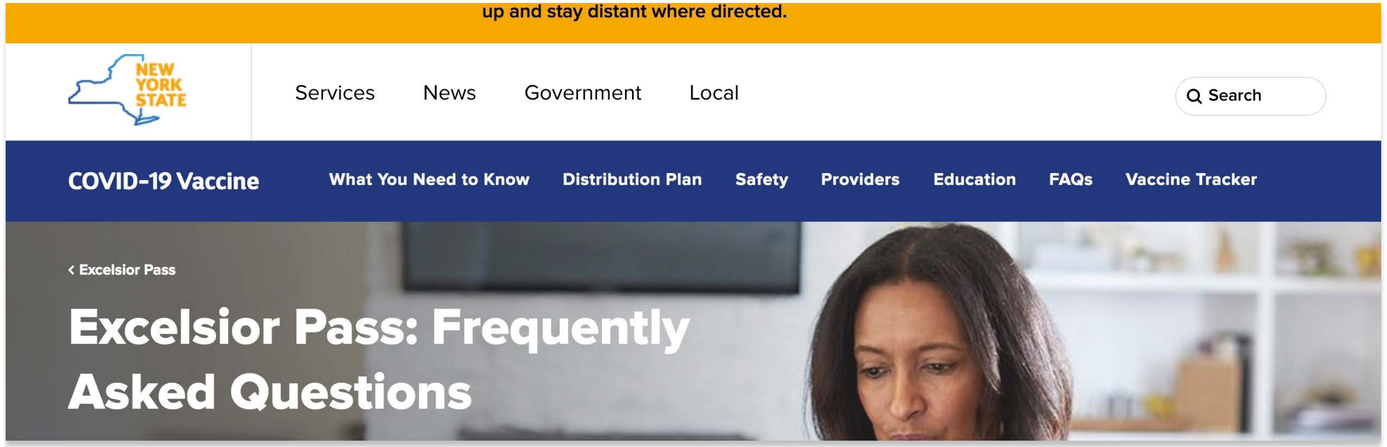
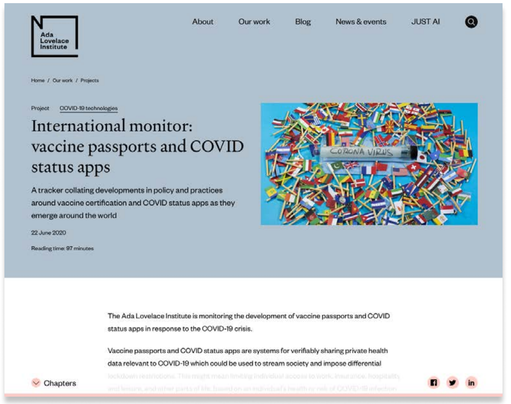
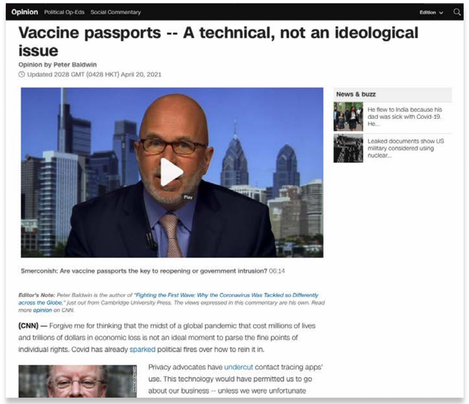




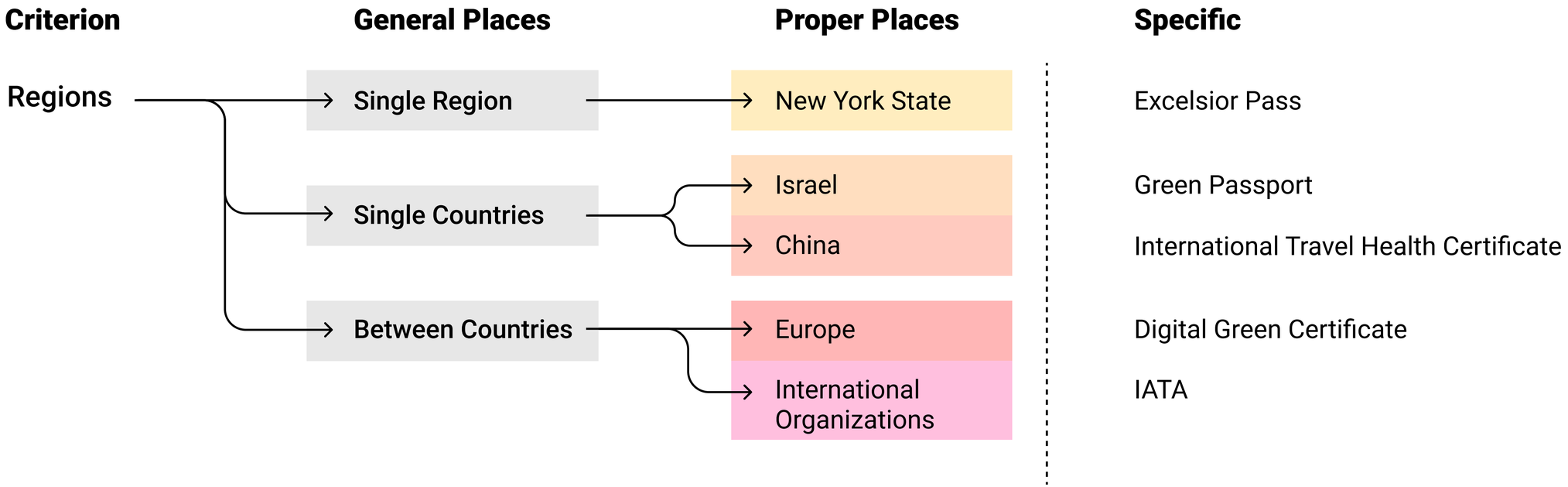






Sources of Evidences

Topics as Places



Evidence Map

Based on Literature Review

General Purpose:

To explore how **standardizations of the vaccine passport system** are related to different **local and global situations** in order to create a **fulfilled experience** without **fear and anxiety** for the holders.

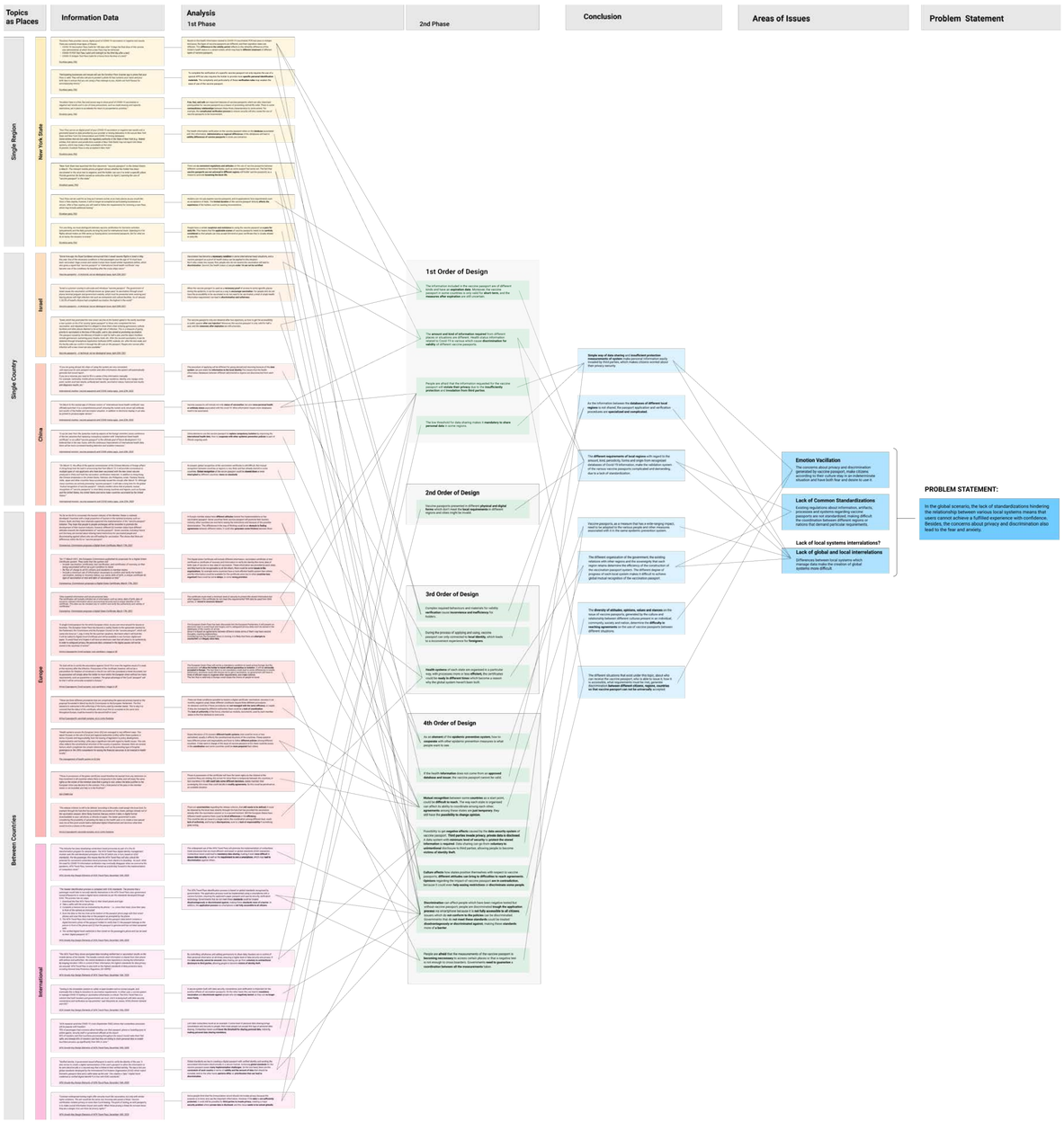


Figure 19: Evidence Map. Developed by Zhang Jing, Giorgia Ballabio, Xingui Huang, Philipp Henzler. Based on Theories from John Dewey, Spinoza, Richard Buchanan, Raymond Williams and Caroline Whitbeck

Evidence Map

Based on Literature Review

Information Data

Identified starting from our *topics as places*.

Figure 19: Evidence Map. Developed by Zhang Jing, Giorgia Ballabio, Xingui Huang, Philipp Henzler. Based on Theories from John Dewey, Spinoza, Richard Buchanan, Raymond Williams and Caroline Whitbeck

Evidence Map

Based on Literature Review

First Phase of Analysis

Interpreting the *information data identifying indeterminate situations* and *paradoxes.*

Figure 19: Evidence Map. Developed by Zhang Jing, Giorgia Ballabio, Xingui Huang, Philipp Henzler. Based on Theories from John Dewey, Spinoza, Richard Buchanan, Raymond Williams and Caroline Whitbeck

Evidence Map

Based on Literature Review

Second Phase of Analysis

Applying four orders of design as places of discovery to find common patterns of interrelations.

Figure 19: Evidence Map. Developed by Zhang Jing, Giorgia Ballabio, Xingui Huang, Philipp Henzler. Based on Theories from John Dewey, Spinoza, Richard Buchanan, Raymond Williams and Caroline Whitbeck

Evidence Map

Based on Literature Review

Conclusions, Areas of Issues and Problem Statement

Drawing conclusions starting from different analysis in the second phase, and identify *areas of issues* which lead to the *problem statement*.

Figure 19: Evidence Map. Developed by Zhang Jing, Giorgia Ballabio, Xingui Huang, Philipp Henzler. Based on Theories from John Dewey, Spinoza, Richard Buchanan, Raymond Williams and Caroline Whitbeck

Evidence Map

Information Data

Europe

“These are three different procedures that are complicating the approval process based on the proposal forwarded in March by the EU Commission to the European Parliament. The first obstacle to overcome is the uniformity of the forms used by member states. This is why it is rumored that the debut of the certificate, which must first be accepted at the same time throughout Europe, could be moved to the second half of June.”

Arriva il passaporto vaccinale europeo, ecco come funziona

Analysis 1st Phase

There are three conditions possible to receive a digital certificate: vaccination, recovery in six months, negative swab; these different conditions require three different procedures. An obstacle could be if these procedures are **not managed with the same efficency**, or maybe if they are managed by different authorities there could be a **lack of coordination**. The **lack of uniformity** of the forms, intended as modulis, documents, used by each member states is the first obstacle to overcome.

Figure 19: Evidence Map. Developed by Zhang Jing, Giorgia Ballabio, Xingui Huang, Philipp Henzler. Based on Theories from John Dewey, Spinoza, Richard Buchanan, Raymond Williams and Caroline Whitbeck

Evidence Map

Analysis 2nd Phase

1th Order of Design

2th Order of Design

3th Order of Design

4th Order of Design

Mutual recognition between some **countries** as a start point, could be **difficult to reach**. The way each state is organised can affect its ability to coordinate among each other; **agreements** among these states are **just temporary**, they still have the **possibility to change opinion.**

Conclusion

The different organization of the government, the existing relations with other regions and the sovereignty that each region retains determine the efficiency of the construction of the vaccination passport system. The different degree of progress of each local system makes it difficult to achieve global mutual recognition of the vaccination passport.

Figure 19: Evidence Map. Developed by Zhang Jing, Giorgia Ballabio, Xingui Huang, Philipp Henzler. Based on Theories from John Dewey, Spinoza, Richard Buchanan, Raymond Williams and Caroline Whitbeck

Areas of Issues

Emotion Vacillation

The concerns about privacy and discrimination generated by vaccine passport, make citizens according to their culture stay in an indeterminate situation and have both fear and desire to use it.

Lack of Common Standardizations

Existing regulations about information, artifacts, processes and systems regarding vaccine passports are not standardized, making difficult the coordination between different regions or nations that demand particular requirements.

Lack of local systems interralations

Differences between local systems which manage data make the creation of global systems more difficult.

Figure 19: Evidence Map. Developed by Zhang Jing, Giorgia Ballabio, Xingui Huang, Philipp Henzler. Based on Theories from John Dewey, Spinoza, Richard Buchanan, Raymond Williams and Caroline Whitbeck

Problem Statement

In the **global scenario**, the **lack of standardizations** hindering the **relationship** between various **local systems** means that users cannot achieve a **fulfilled experience** with **confidence**. Besides, the **concerns** about **privacy** and **discrimination** also lead to the **fear** and **anxiety**.

Figure 19: Evidence Map. Developed by Zhang Jing, Giorgia Ballabio, Xingui Huang, Philipp Henzler. Based on Theories from John Dewey, Spinoza, Richard Buchanan, Raymond Williams and Caroline Whitbeck

Initial Ideas

Problem Statement

In the **global scenario**, the **lack of standardizations** hindering the **relationship** between various **local systems** means that users cannot achieve a **fulfilled experience** with **confidence**. Besides, the **concerns** about **privacy** and **discrimination** also lead to the **fear** and **anxiety**.

Initial Ideas

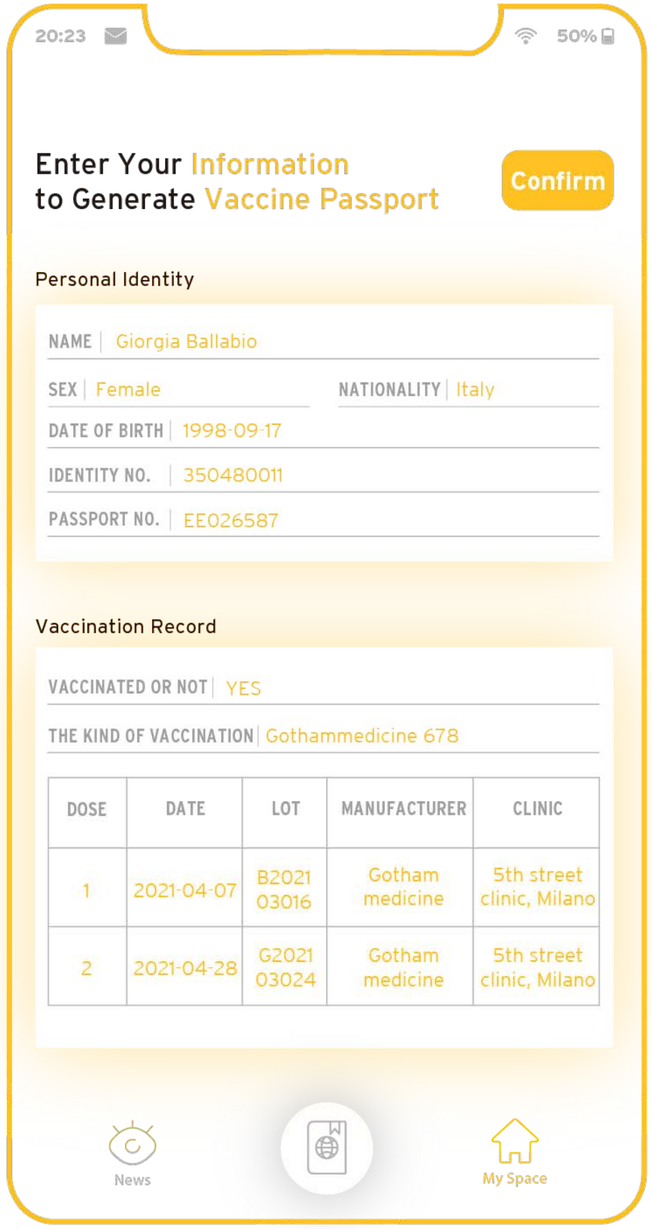
1. Common standard framework should be established
2. Service system can be used locally and globally
3. Reliable security measures to protect the privacy

App

Initial Ideas

1 Common Standard Framework Should Be Established

All regions willing to use vaccine passports should work together to establish a common standard framework regarding the information: personal information, health status; the form so that all the regions will have to recognize the QR code;



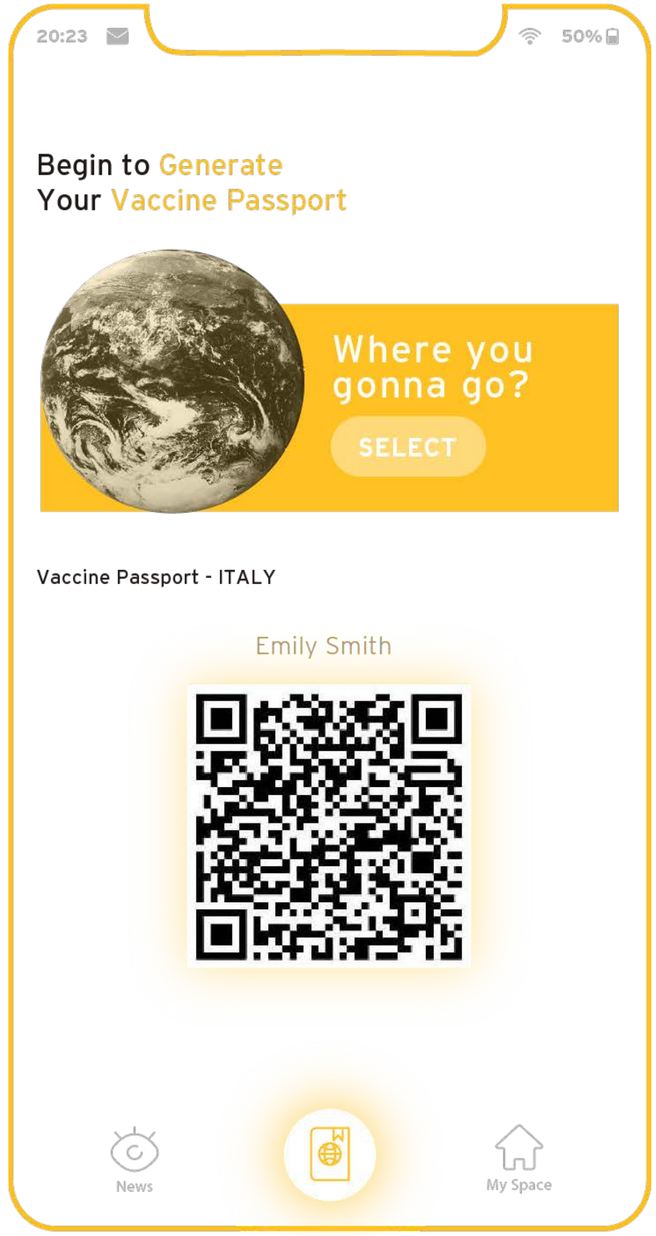


Figure 20: Wireframes Application 1. Developed by Zhang Jing.

Initial Ideas

2 Service System Can Be Used Locally and Globally

This APP will allow users to generate vaccine passport automatically based on user's identity.

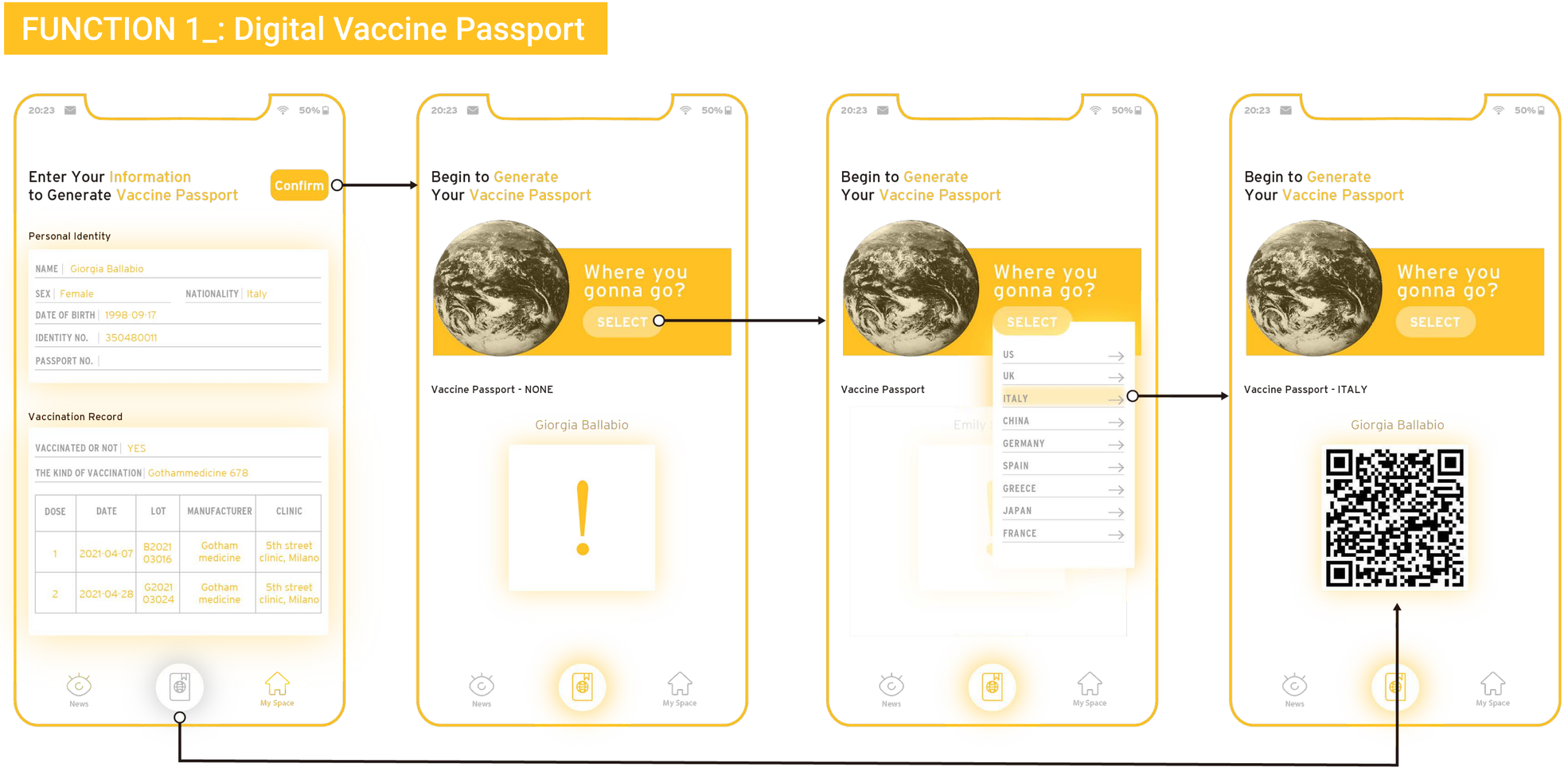


Figure 21: Wireframes Application 2. Developed by Zhang Jing.

Initial Ideas

2 Service System Can Be Used Locally and Globally

When you want to use your vaccine passport globally, this APP can quickly help you generate a version that meets requirements and help you define the items you miss or do not meet.

Figure 22: Wireframes Application 3. Developed by Zhang Jing.

Initial Ideas

3 Reliable Security Measures to Protect the Privacy

No centralised databases, every countries will rely on its own database, and the data about the users will not be stored in the hostpitant conutries.
In this way users will feel in control of their data.

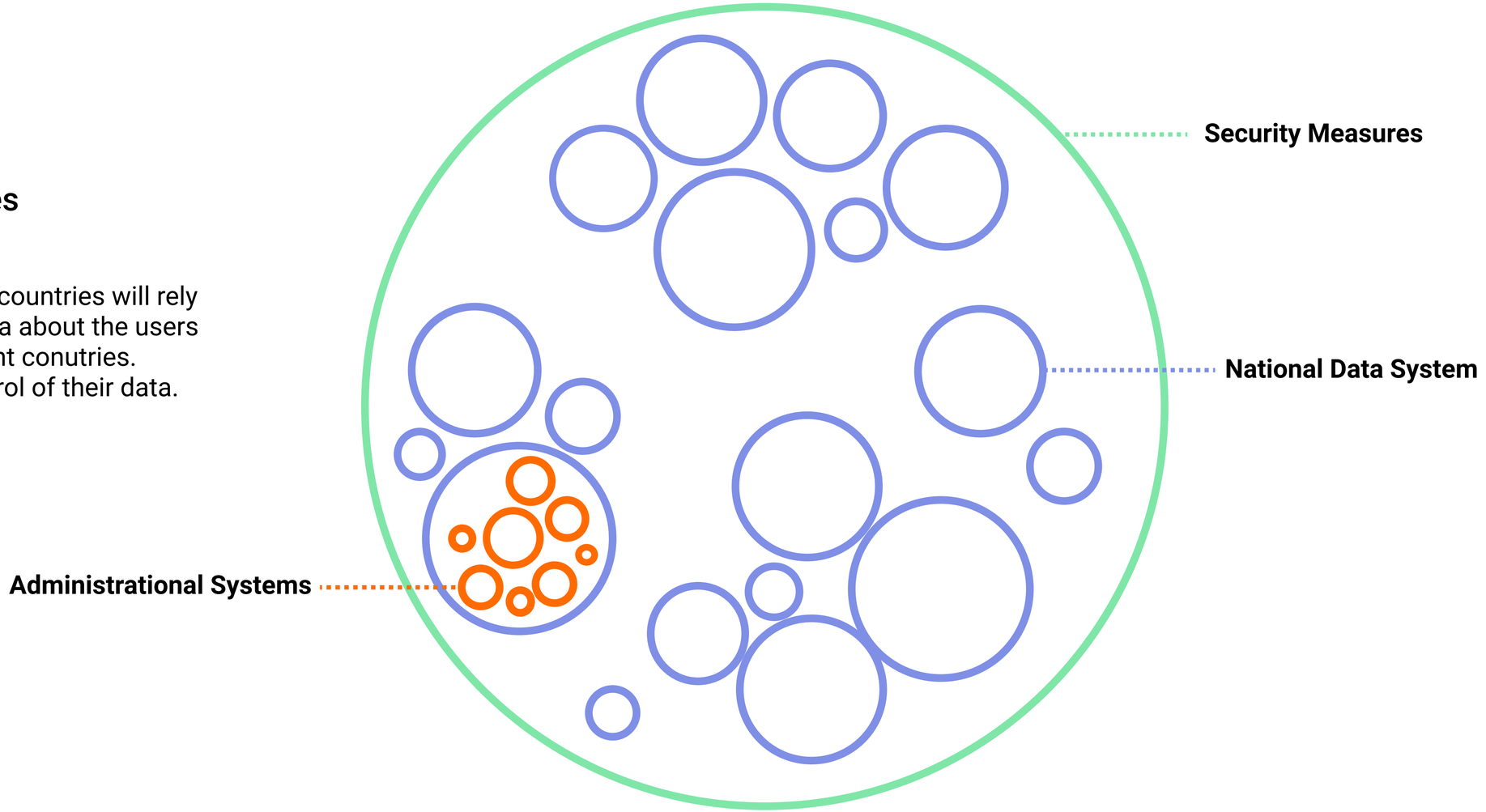


Figure 23: Security Measures Visualisation. Developed by Zhang Jing, Giorgia Ballabio, Xingui Huang, Philipp Henzler.

Timeline

Process to Develope

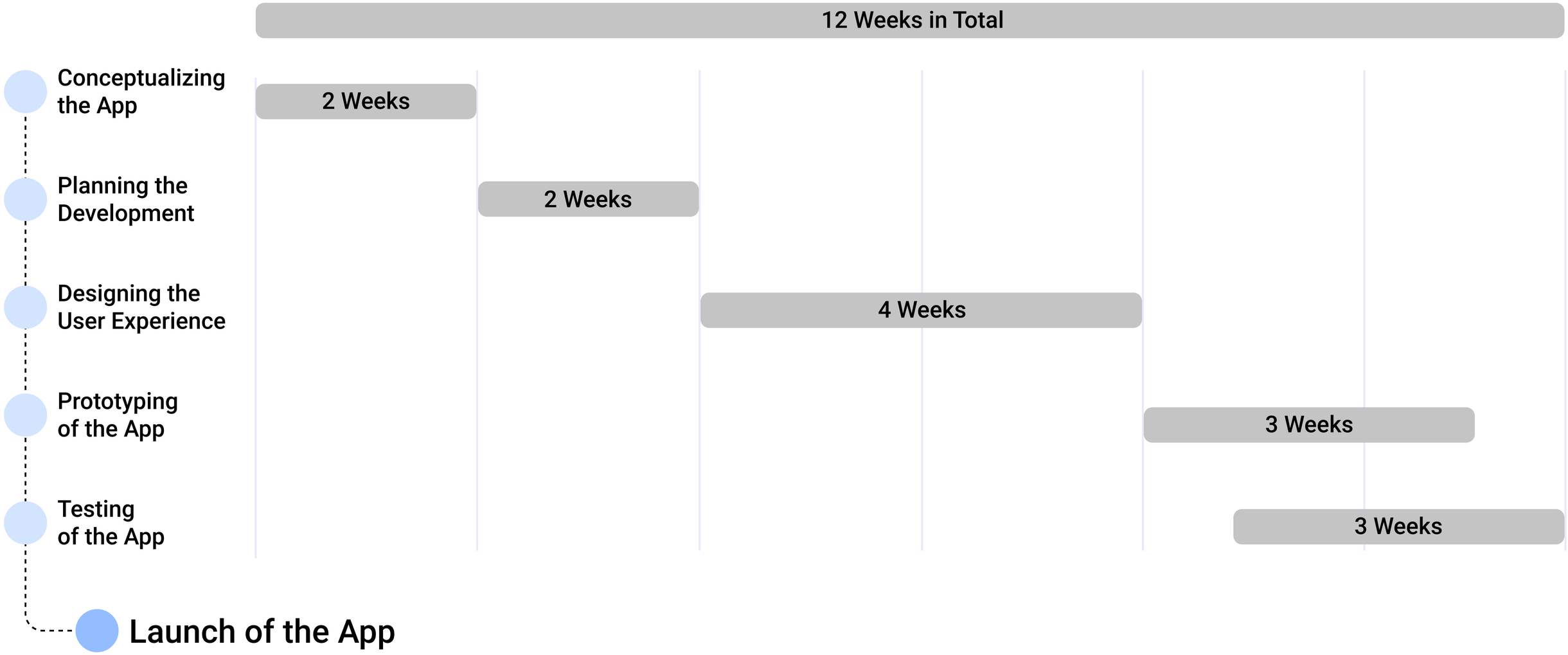


Figure 24: Timeline - Process to Develope. Developed by Zhang Jing, Giorgia Ballabio, Xingui Huang, Philipp Henzler.

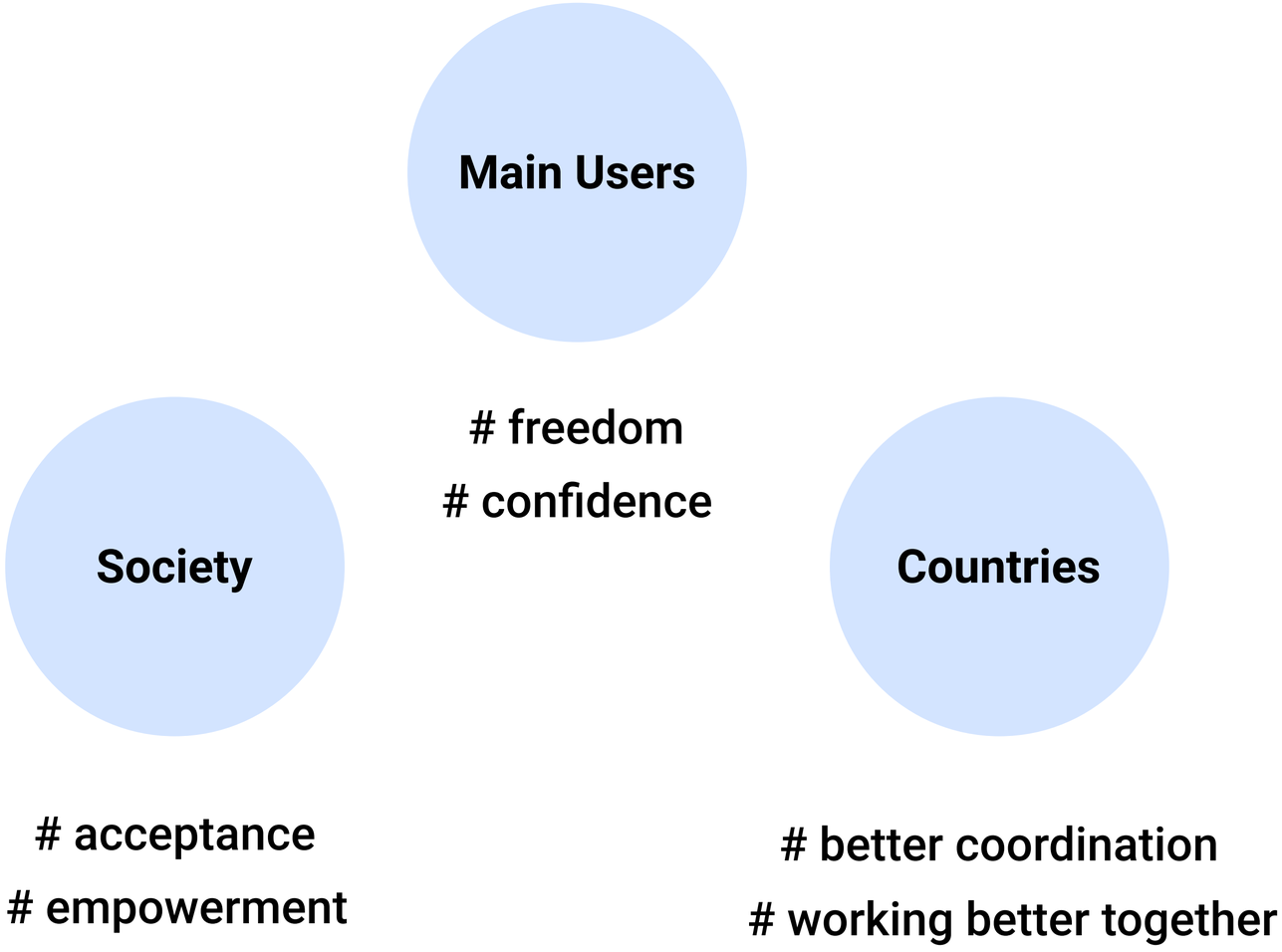
Significance

Values and Benefits of the Project

For main users, the new dynamics of vaccine passports in different regions presented in this App can help them alleviate the uncertainty of the differences in various regions. By applying for a vaccine passport that meets the requirements of the destination through the App, they can use the vaccine passport confidently and truly realize the freedom and convenience of entering various places in daily life.

For different countries, the vaccine passport with more easily global circulation and cross-regional validity can promote people's exchanges in various regions under the influence of the epidemic, so that various regions can cooperate better and more closely.

For our society, this App will help people to use vaccine passports confidently in different local and global scenarios, thereby promoting different regions to accept each other more inclusively. Eventually, the society under the influence of the epidemic will become more vigorous and motivated with the help of positive vaccine passports.



Thank you!

Danke Grazie Xiè xie

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Professor Kaja Tooming Buchanan, PHD

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Figure 1: Brainstorming Map. Developed by Zhang Jing.

Figure 2: Brainstorming Map. Developed by Philipp Henzler.

Figure 3: Brainstorming Map. Developed by Xingui Huang.

Figure 4: Brainstorming Map. Developed by Giorgia Ballabio.

Figure 5: Complexity Map - Find interrelations between the places of information. Developed by Cai Yanni & Zhang Jing.

Figure 6: Complexity Map - Find interrelations between the places of information. Developed by Luka Jacke, Simon Widmann & Philipp Henzler.

Figure 7: Complexity Map - Find interrelations between the places of information. Developed by Xingui Huang.

Figure 8: Complexity Map - Find interrelations between the places of information. Developed by Giorgia Ballabio.

Figure 9: Definition Insights. Developed by Zhang Jing, Giorgia Ballabio, Xingui Huang, Philipp Henzler.

Figure 10: Exploration of the Concept. Developed by Zhang Jing, Giorgia Ballabio, Xingui Huang, Philipp Henzler.

Figure 11: Process of using Vaccine Passport. Developed by Zhang Jing, Giorgia Ballabio, Xingui Huang, Philipp Henzler. Based on Designchallenge given by Profesor Kaja Tooming Buchanan.

Figure 12: Methods - Process to Identify the Problem Statement. Developed by Zhang Jing, Giorgia Ballabio, Xingui Huang, Philipp Henzler.

Figure 13: Concept Map - Commonplaces as Places of Discovery. Developed by Zhang Jing, Giorgia Ballabio, Xingui Huang, Philipp Henzler.

Figure 14: Concept Map - Interrelations Between Places of Discovery. Developed by Zhang Jing, Giorgia Ballabio, Xingui Huang, Philipp Henzler.

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Figure 17: Theoretical Framework - Basic Framework. Developed by Zhang Jing, Giorgia Ballabio, Xingui Huang, Philipp Henzler. Based on Theories from John Dewey, Erving Goffman, Spinoza, Richard Buchanan, Raymond Williams and Caroline Whitbeck

Figure 17.1: Theoretical Framework - Framework With Connections. Developed by Zhang Jing, Giorgia Ballabio, Xingui Huang, Philipp Henzler. Based on Theories from John Dewey, Erving Goffman, Spinoza, Richard Buchanan, Raymond Williams and Caroline Whitbeck

Figure 17.2: Theoretical Framework - Focused Theories. Developed by Zhang Jing, Giorgia Ballabio, Xingui Huang, Philipp Henzler. Based on Theories from John Dewey, Erving Goffman, Spinoza, Richard Buchanan, Raymond Williams and Caroline Whitbeck

Figure 18: Strategic Framework. Developed by Zhang Jing, Giorgia Ballabio, Xingui Huang, Philipp Henzler. Based on Theories from John Dewey, Spinoza, Richard Buchanan, Raymond Williams and Caroline Whitbeck

Figure 19: Evidence Map. Developed by Zhang Jing, Giorgia Ballabio, Xingui Huang, Philipp Henzler. Based on Theories from John Dewey, Spinoza, Richard Buchanan, Raymond Williams and Caroline Whitbeck

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