

# Augmented Cultural User Experience (ACUX)

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# PhD thesis motivation

"Today, the typical cultural visitors utilizes a smartphone and digital technologies to facilitate their journey, expecting to receive personalized recommendations whenever and wherever they need them.

They may not consciously **be aware** of their desires and therefore may not **be able to express** them explicitly."



# Thesis aim



The primary aim of this thesis is:

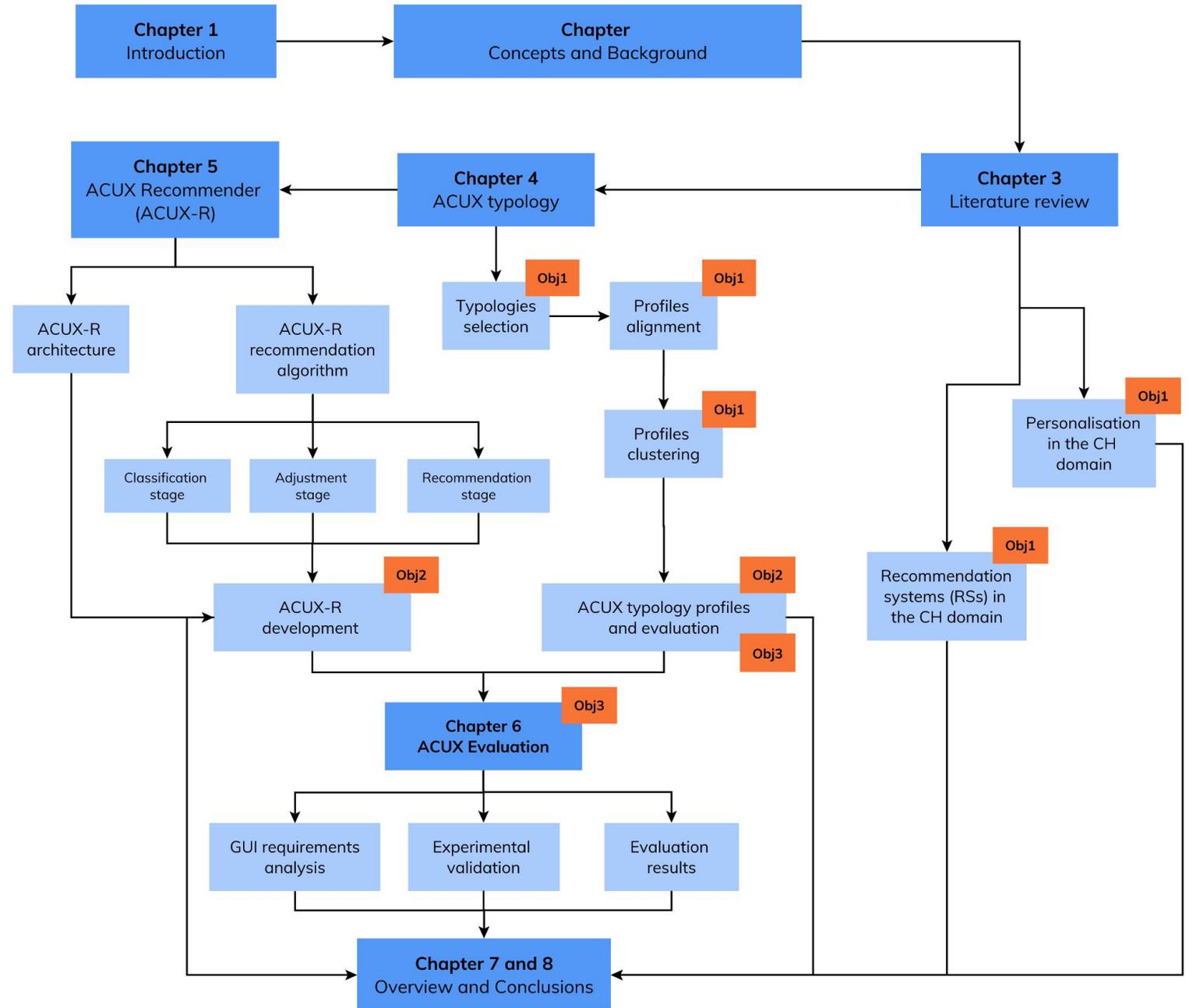
*“To augment the cultural user experience by applying a multi-profile classification of cultural visitors and validate it through a mobile recommendation system”*

# Thesis objectives

- Objective 1: To select typologies based on visiting preferences that will be considered primordial to align their profiles.
- Objective 2: To develop and evaluate the ACUX typology. Also, to develop the ACUX Recommender (ACUX-R).
- Objective 3: To evaluate ACUX typology via two case studies using the ACUX-R MRS.



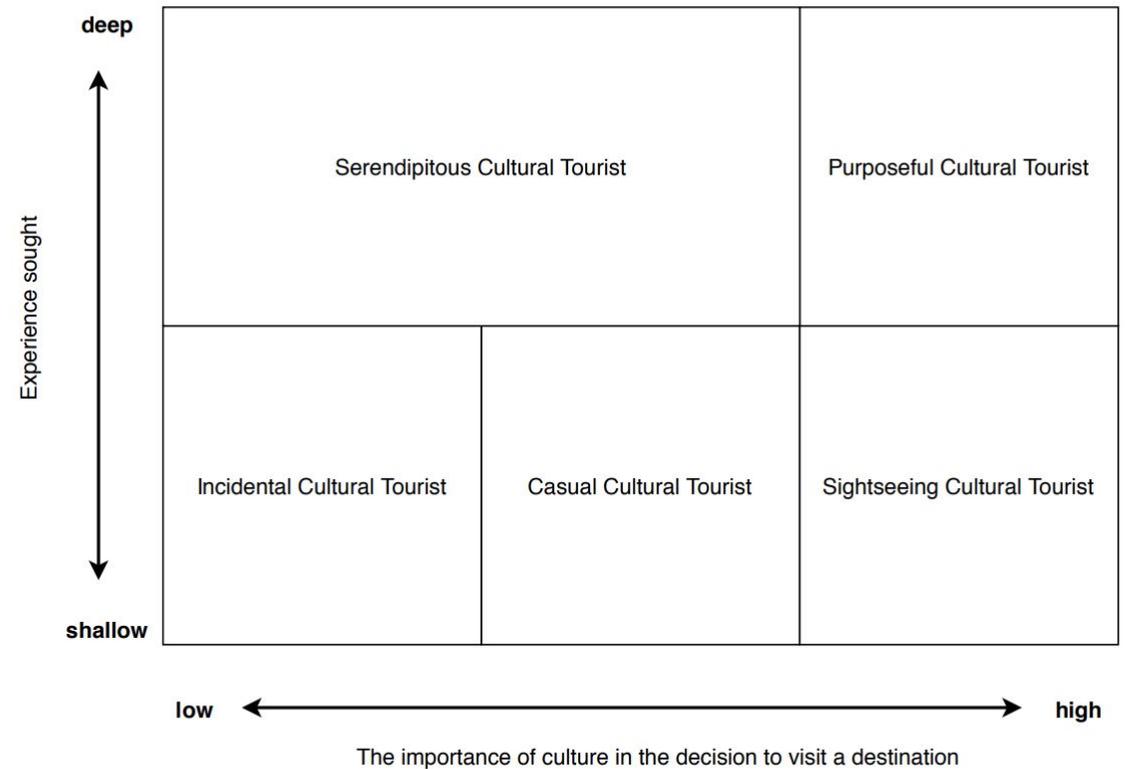
# Thesis structure



# User typology

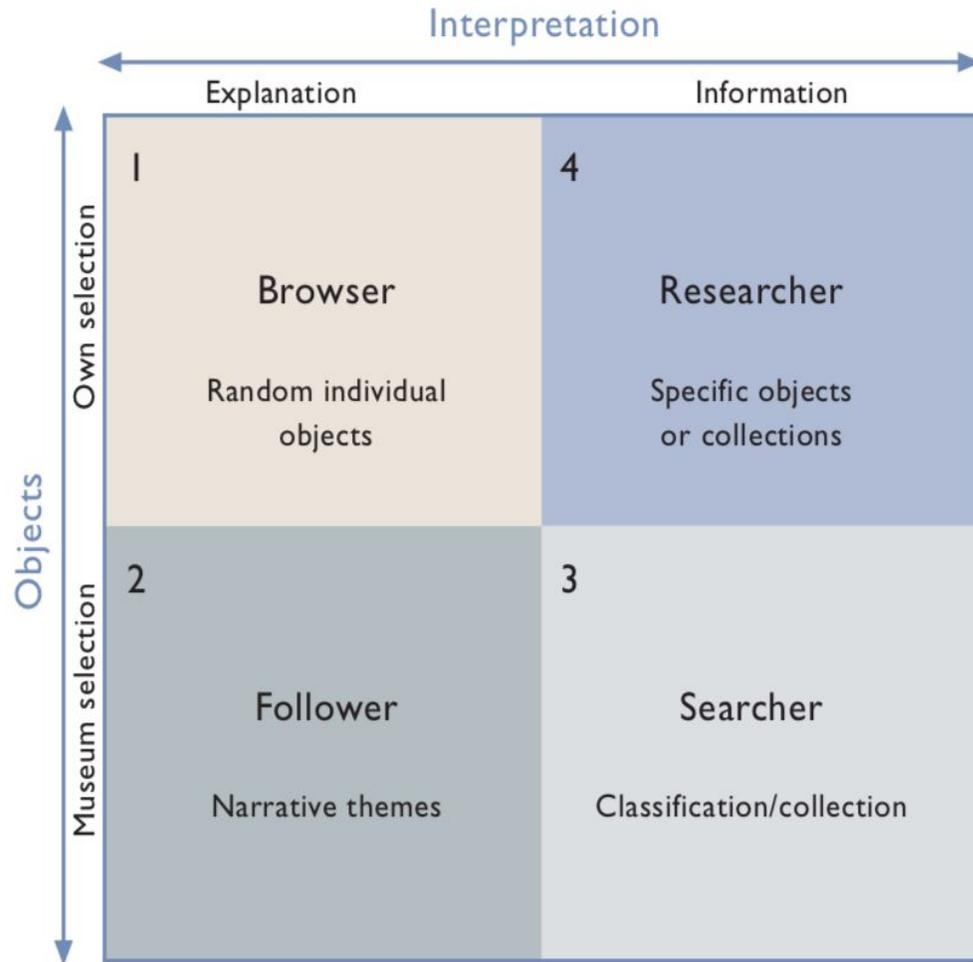
"The set of user profiles (or personas) constitutes the **user typology**.

For example, the McKercher typology consists of five user profiles (Serendipitous, Purposeful, Incidental, Casual, and Sightseeing)."



Cultural tourist types according to McKercher (2002)

# Typologies of cultural tourism



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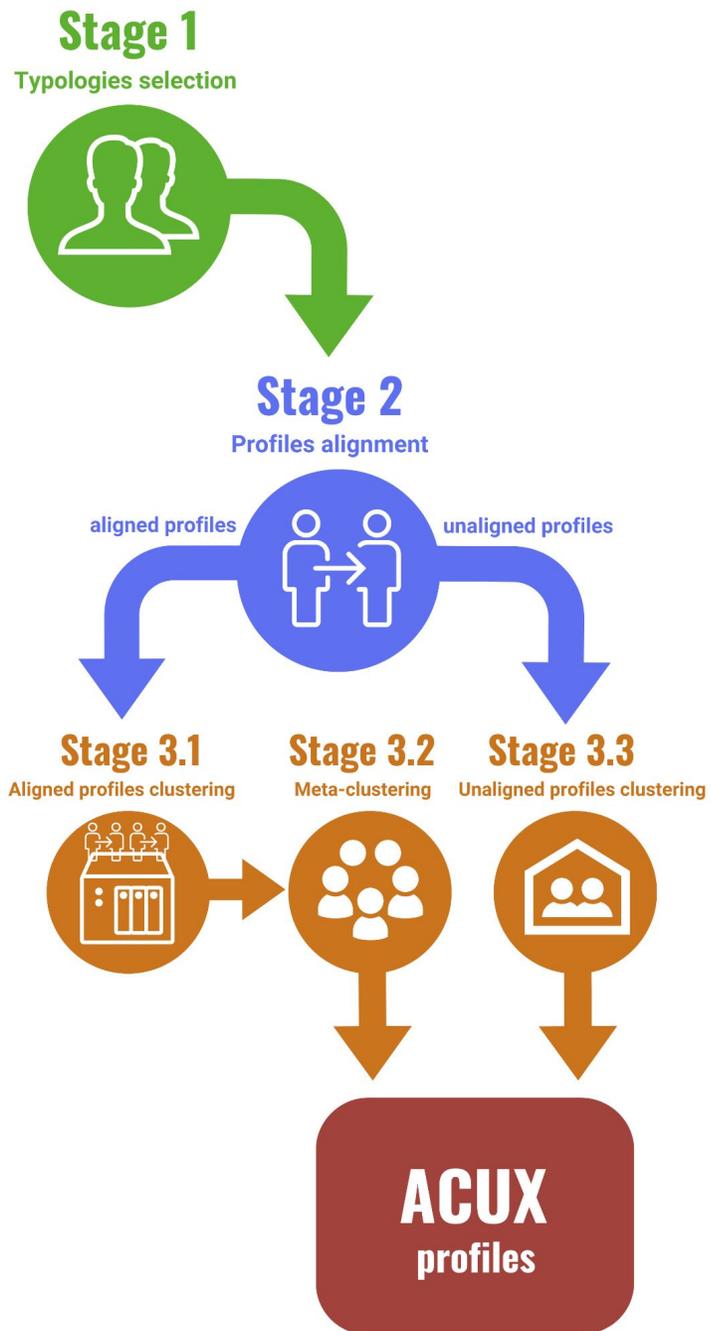
Morris' typology (2004)

Type of culture tourist	Typical places/activities of interest
Heritage tourist	<ul style="list-style-type: none"> <li>• Visits to castles, palaces, country houses</li> <li>• Archaeological sites</li> <li>• Monuments</li> <li>• Architecture</li> <li>• Museums</li> <li>• Religious sites</li> </ul>
Arts tourist	<ul style="list-style-type: none"> <li>• Visits to the theatre</li> <li>• Concerts</li> <li>• Galleries</li> <li>• Festivals, carnivals and events</li> <li>• Literary sites</li> </ul>
Creative tourist	<ul style="list-style-type: none"> <li>• Photography</li> <li>• Painting</li> <li>• Pottery</li> <li>• Cookery</li> <li>• Crafts</li> <li>• Language learning</li> </ul>
Urban cultural tourist	<ul style="list-style-type: none"> <li>• Historic sites</li> <li>• Regenerated industrial cities</li> <li>• Waterfront developments</li> <li>• Arts and heritage attractions</li> <li>• Shopping</li> <li>• Nightlife</li> </ul>
Rural cultural tourist	<ul style="list-style-type: none"> <li>• Village, farm or agro-tourist</li> <li>• Eco-museums</li> <li>• Cultural landscapes</li> <li>• National parks</li> <li>• Wine trails</li> </ul>
Indigenous cultural tourist	<ul style="list-style-type: none"> <li>• Hill-tribe, desert or mountain trekking</li> <li>• Visits to cultural centres</li> <li>• Arts and crafts</li> <li>• Cultural performances</li> <li>• Festivals</li> </ul>
Popular cultural tourist	<ul style="list-style-type: none"> <li>• Theme parks and themed attractions</li> <li>• Shopping malls</li> <li>• Pop concerts</li> <li>• Sporting events</li> <li>• Media and film sets</li> <li>• Industrial heritage sites</li> <li>• Fashion and design museums</li> </ul>

Type of cultural tourist (Smith, 2003)



# Proposed ACUX typology



# ACUX typology stages

# ACUX typology

along with the five typologies from which it is derived (Konstantakis, 2022)

Seaton typology	McKercher typology	Gibson typology	Smith typology	Grün typology	ACUX
Dilettante/Aesthete Antiquarian Seeker Littérateur	Purposeful	Archaeologist Educational Tourist Seeker	Heritage Tourist Rural Cultural Tourist	Cultural Visitor	<b>ARCHAEOLOGIST</b>
Dilettante/Aesthete Littérateur Modernist Religious Pilgrim & Spiritual Seeker	Purposeful	Educational	Arts Tourist Popular Cultural Tourist	Cultural Visitor	<b>ART SEEKER</b>
Explorer/Adventurer Festival Charivariist Sportsman Sun & Sand hedonist	Incidental Serendipitous Casual	Thrill Seeker Explorer Active Sports Tourist Sun Lover Action Seeker	Indigenous Tourist	Sun Worshipper Avid Athlete Action Seeker	<b>LEISURE SEEKER</b>
Religious Pilgrim & Spiritual Seeker	Purposeful	Seeker	Heritage Tourist	Nature Lover	<b>RELIGIOUS SEEKER</b>
Natural & Social Scientist	Serendipitous	Drifter Seeker	Rural Tourist	Nature Lover	<b>NATURALIST</b>
Natural & Social Scientist Festival Charivariist	Purposeful	Anthropologist Drifter	Creative Tourist Urban Tourist	Educational Buff	<b>TRADITIONALIST</b>
Epicurean	Incidental	Action Seeker	Urban Tourist	Action Seeker	<b>GOURMAND</b>
Modernist	Sightseeing	Action Seeker	Urban Tourist Popular Tourist	Sight Seeker	<b>VIRAL SEEKER</b>

# ACUX profiles and visiting preferences per profile

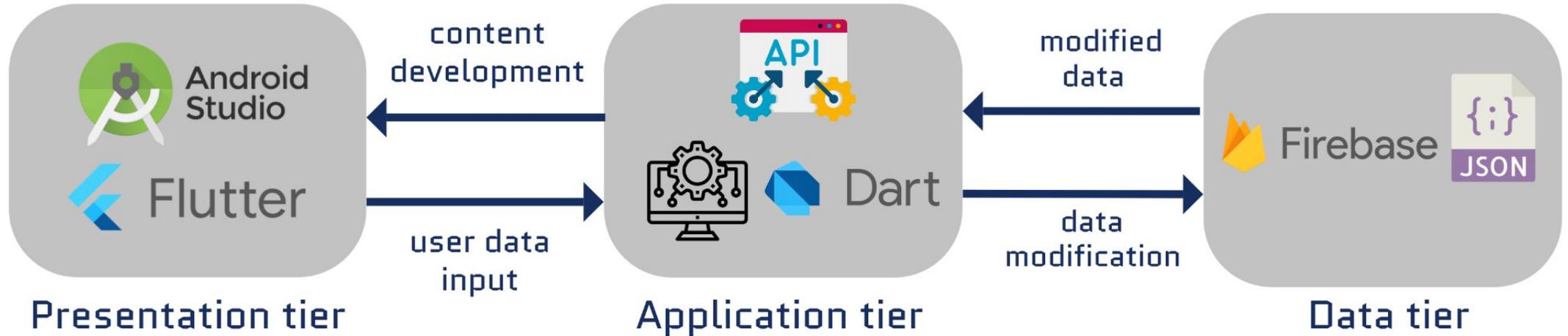
ACUX profile	Visiting preferences
Archaeologist	museums, galleries, cultural sites and landscapes, archive and manuscript centres, castles, palaces, country houses, architectural sites, museums and religious sites
Art Seeker	fine arts museums, art galleries, pottery and photography museums, theatres, concert halls, cultural centres, engraving, graffiti sites, textiles, pottery, painting, sculpture, iconography, handcrafts and literary sites
Leisure Seeker	music festivals, sporting events, carnivals, zoos, seaside resorts, indoor game sites, health resorts, hill tribes, deserts or mountains
Religious Seeker	pilgrimage destinations, cathedrals, temples, seeking retreats for spiritual enlightenment through religion

ACUX profile	Visiting preferences
Naturalist	villages, farms, national parks, gardens, caverns, woods, lakes, ecomuseums, cultural landscapes, and wine routes
Traditionalist	traditional cuisine, learn a different language in a village setting, buy arts and crafts, witness traditional cultural performances, enjoy the beautiful scenery of joyful villagers, visit tribal communities, ethnic groups, minority cultures, and attend traditional music events
Gourmand	fine dining, wine tasting, food sampling, cookery courses, breweries and distilleries
Viral Seeker	modern popular culture, pop concerts, shopping malls, media and film sets, technology, industrial heritage sites, fashion shows, and design museums

# Proposed ACUX Recommendation system



# ACUX-R architecture



# ACUX-R algorithm

<i>Classification stage</i>	User SELECTs icons (minimum 5) FOREACH selected icon ASSIGN corresponding profile to user (multi-assign) FOREACH profile assigned (at least once) CALCULATE score ( <i>Equation 1</i> ) DISPLAY ACUX-R profile (as a set of scores)
<i>Adjustment stage</i>	IF user NOT satisfied with ACUX-R profile User UPDATEs ACUX-R profile (manually) DISPLAY final ACUX-R profile
<i>Recommendation stage</i>	DETERMINE recommended POIs ( <i>Equation 2</i> ) DISPLAY recommended POIs

# GUI implementation and ACUX-R evaluation



# User profiles - ACUX-R GUI



**Archaeologist**

**You like:** the past with particular attention to ancient artefacts, cultural heritage sites, the history of a place, comprehensive knowledge of a destination and to visit the top archaeological sites while travelling.

**You don't like:** sports, sunbathing, VIP parties, shopping malls and popular gastronomic destinations.



**Religious Seeker**

**You like:** spiritual enlightenment through religion, travel and seeing the places of their faith, to better understand self and the meaning of life.

**You don't like:** crowded places, modern culture, fine dining, sports.



**Art Seeker**

**You like:** art exhibitions, all types of fine arts, to gain knowledge while travelling.

**You don't like:** top archaeological destinations, sea and sun, sports, parties, shopping malls.



**Naturalist**

**You like:** silence and relaxation in nature, inhaling fresh air, getting away from all, balancing the body and spirit and tranquillity.

**You don't like:** crowded mass tourism destinations, large cities, industrial areas and places with loud noises and popular destinations.

# User profiles - ACUX-R GUI



**Gourmand**

**You like:** sensual enjoyment especially from fine food and drink, vacations in elite, world-class resorts, yacht parties and socialising with celebrities.

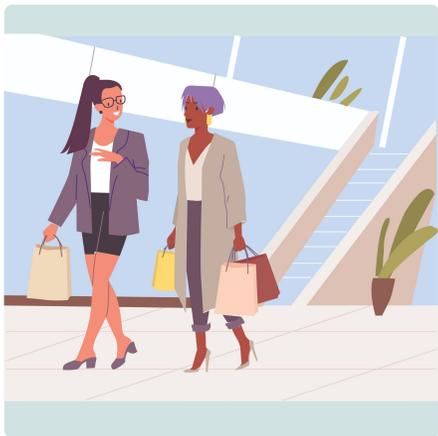
**You don't like:** take-away food, traditional events, peaceful places, last time offers.



**Traditionalist**

**You like:** meeting the locals, consuming the country cuisine, speaking the language and living like a native.

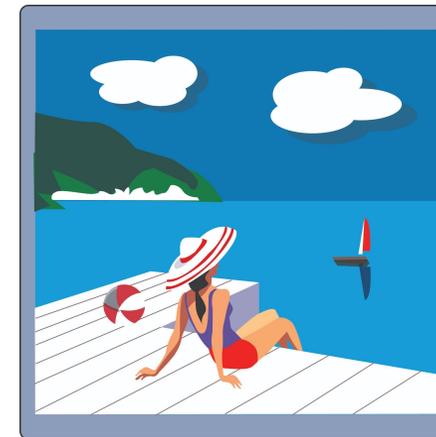
**You don't like:** typical tourist routes, modern events, big club venues and VIP parties.



**Viral Seeker**

**You like:** partying, nightclubs, city highlights and the most important landmarks.

**You don't like:** traditional events, routes in nature, gaining knowledge through culture.

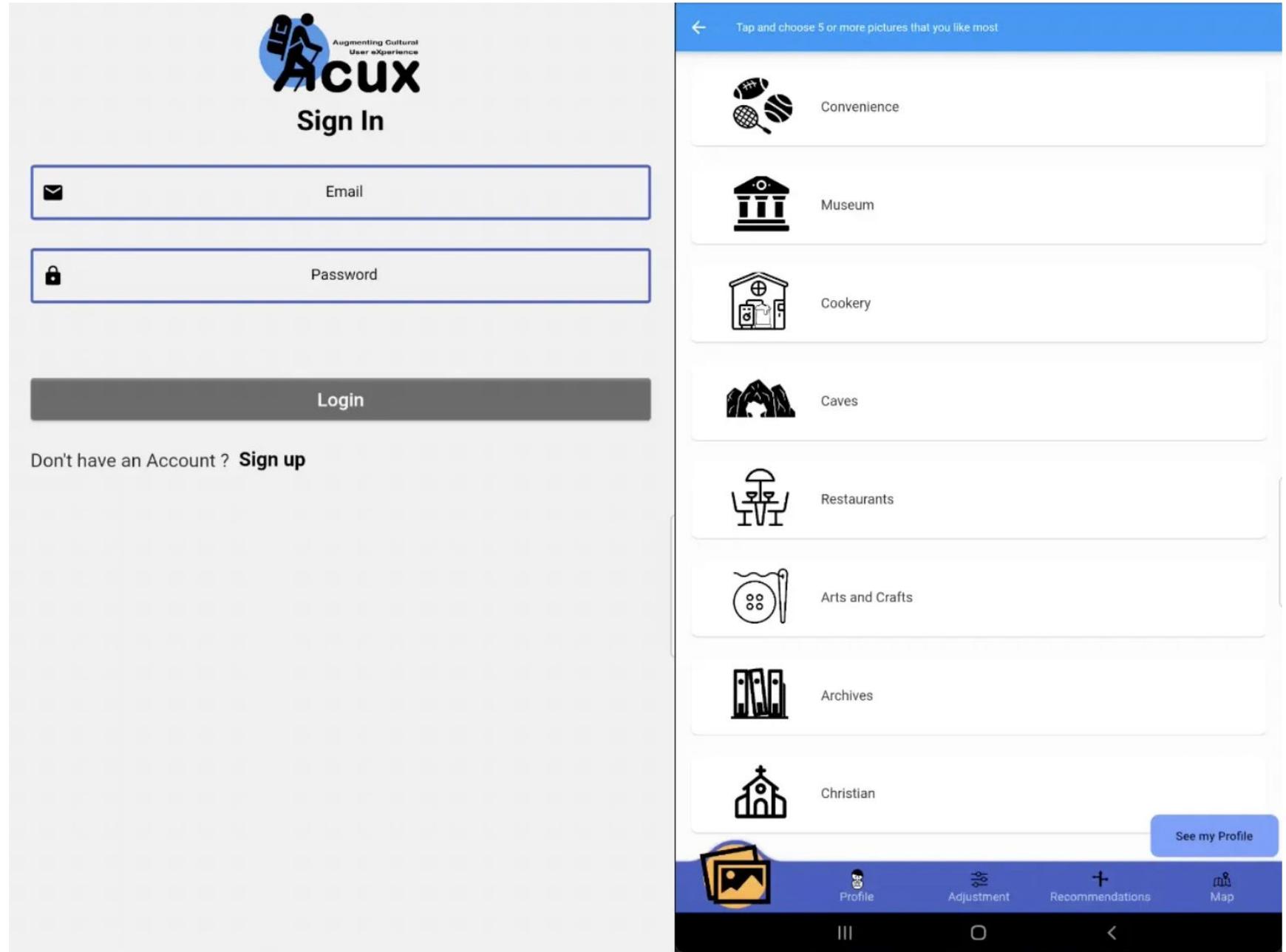


**Leisure Seeker**

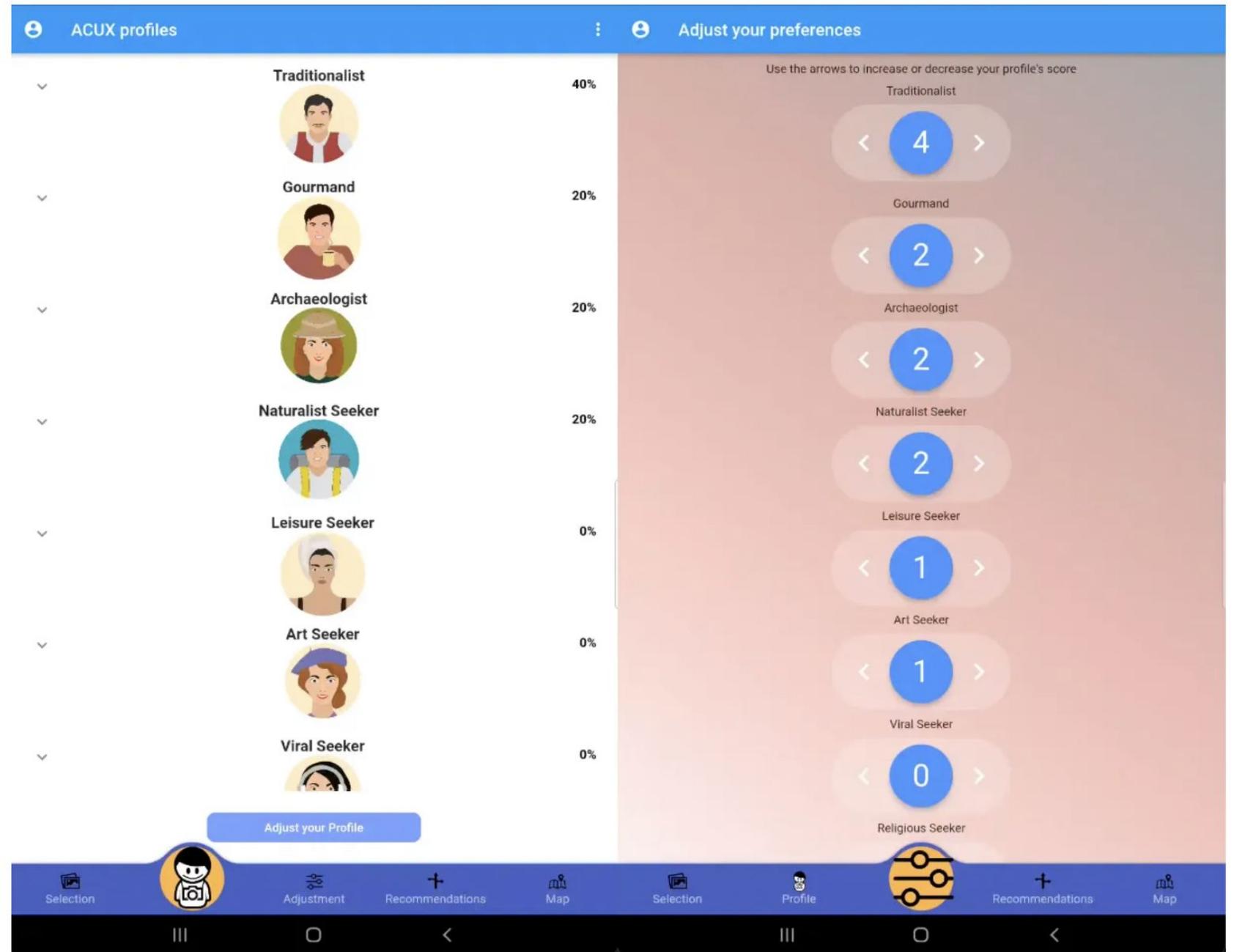
**You like:** warm places, sunbathing, peaceful places for relaxation and sports including those associated with the pursuit of fitness in order to remain active.

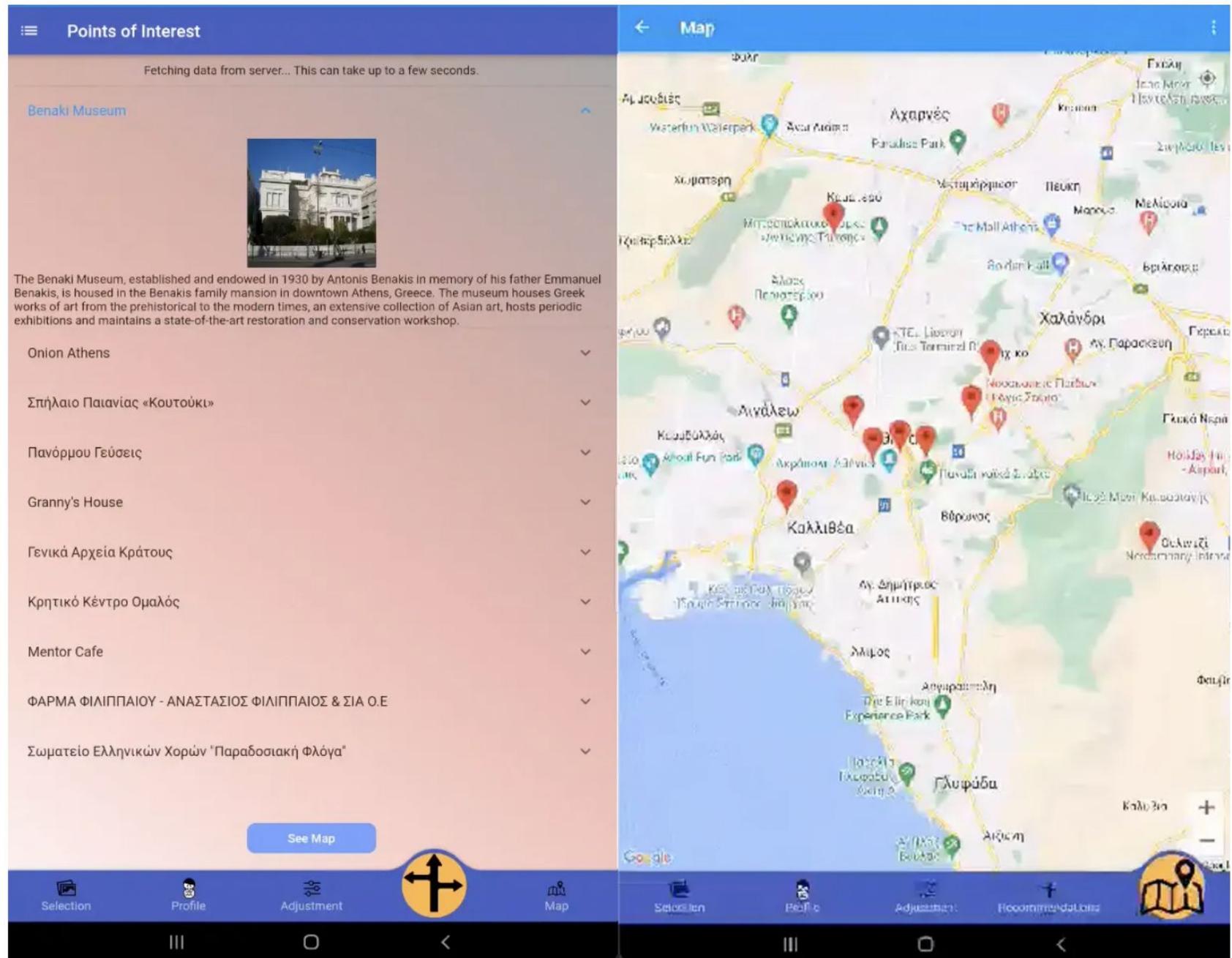
**You don't like:** visiting museums, attending cultural events, gaining knowledge while travelling.

ACUX GUI Home page  
and Selection page



ACUX GUI Profile  
page and Adjustment  
page



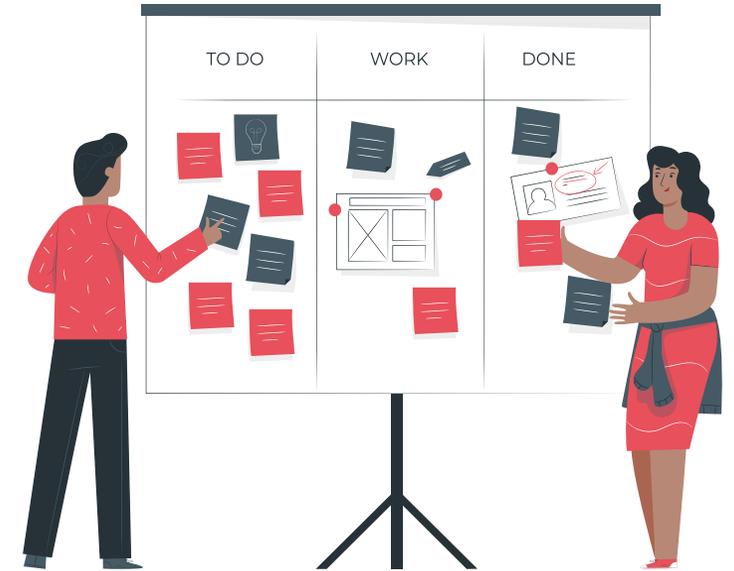


ACUX-R GUI  
Recommendations page  
and Map page

# ACUX Evaluation

Using user study and online questionnaire as evaluation methodologies, we evaluate the ACUX typology through:

- A broader case study that utilizes a dataset of Points of Interest (POI) in the wider Attica region.
- A narrower case study that utilizes a dataset of POIs at the Stavros Niarchos Foundation.



# Innovation and PhD thesis elements



Classification of the user into multiple profiles



User classification based on visitation preferences and user location via GPS



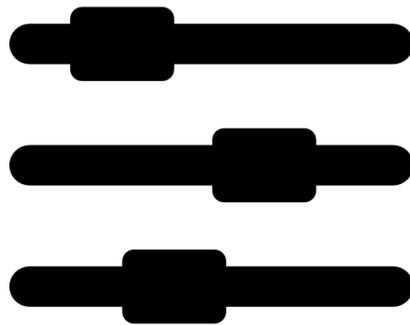
Grouping of profiles from selected typologies based on UNESCO heritage sites



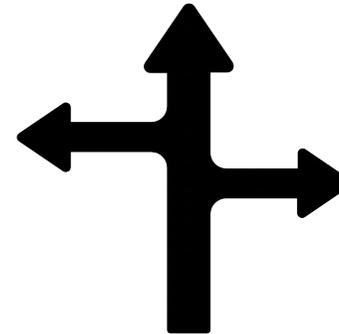
Creation of a new cultural tourism typology



Icon-based interface for quick and intuitive input of user preferences and interests



User profile customization using adjustable sliders



Personalized cultural destination recommendations based on user preferences



Evaluation of the typology through ACUX-R in two case studies

# Acknowledgements



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*Thank you very much for your attention!*

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