# Research and Work Experiences related to Infrastructure in Argentina

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#### **Self Introduction**

- 2002 2007 Undergraduate Student, Department of Architecture, School of Architecture, Design and Planning, University of Buenos Aires, Argentina
- 2007 Intern in the Undersecretary of Urban Development and Housing, Ministry of Planning of Argentina
- 2008 2010 Technical Assessment, Program for Socio-Community Integration, Undersecretary of Urban Development and Housing, Ministry of Planning of Argentina
- 2011 Research Student in Prof. Kobayashi Laboratory, Graduate School of Engineering, Kyoto University, Japan
- 2012 Present Master's Candidate International Program in Urban and Regional Development, Kyoto University, Japan

#### **Presentation Outline**

1. Argentina in the World

- 1.1 Argentina's territorial structure
- 1.2 Argentina's social inequalities
  - -Economy inequality
  - -Demographic inequality
  - -Poverty issues

- 2. Research and Work related to Infrastructure in Argentina
- 2.1 As an undergraduate student (School of Architecture, University of Buenos Aires)
- 2.2 As an intern and architect (Ministry of Federal Planning of Argentina)

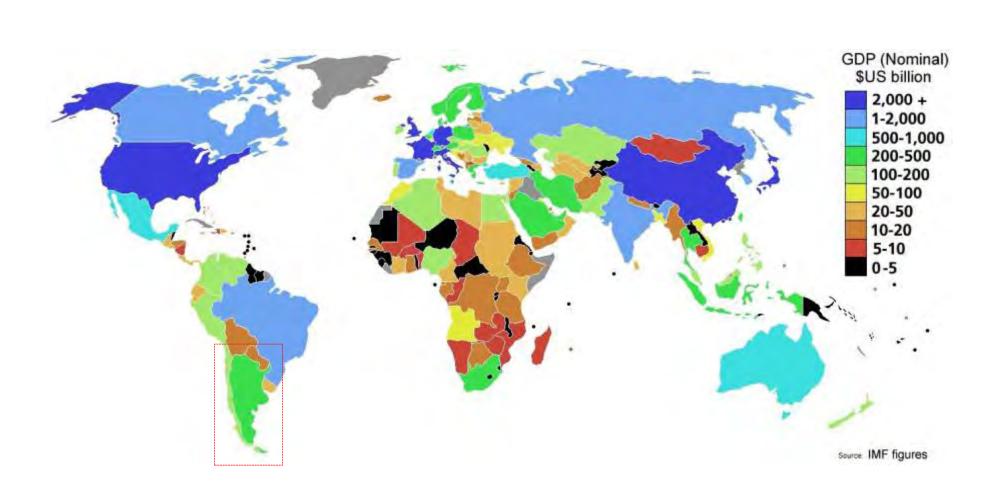
3. Research Theme in Japan

3.1 Using Ontology Engineering to represent the dynamic of the public debate

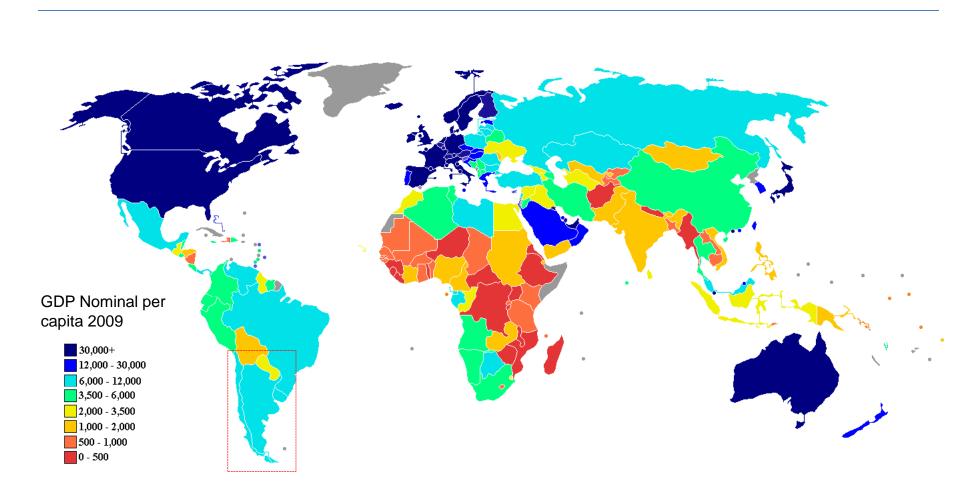
**Location: South America** 



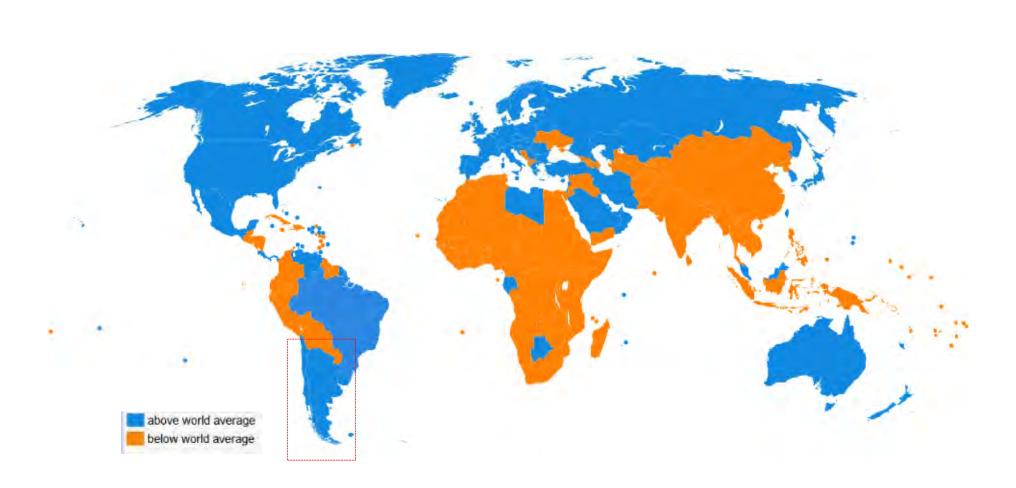
Gross Domestic Product (2010 estimate): U\$S 370.3 billion (27th)



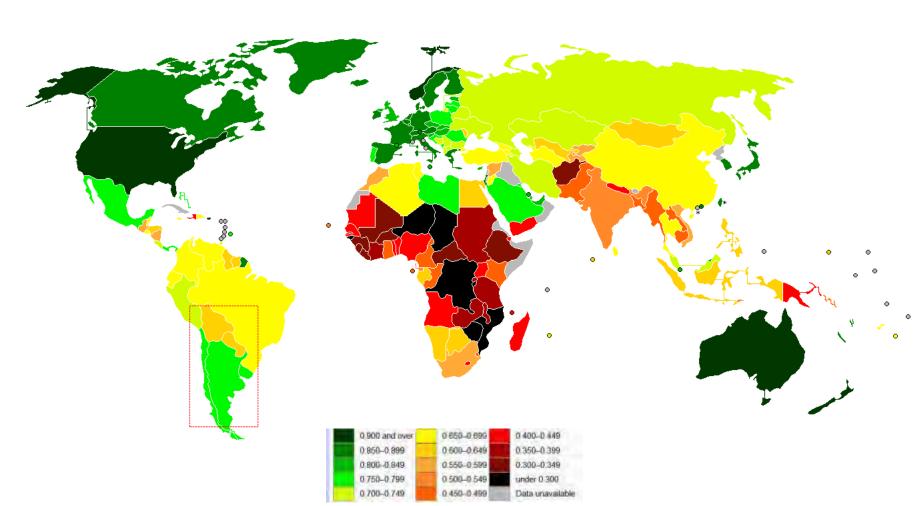
Gross Domestic Product (2010 estimate): Per capita U\$S 9,138 (62nd)



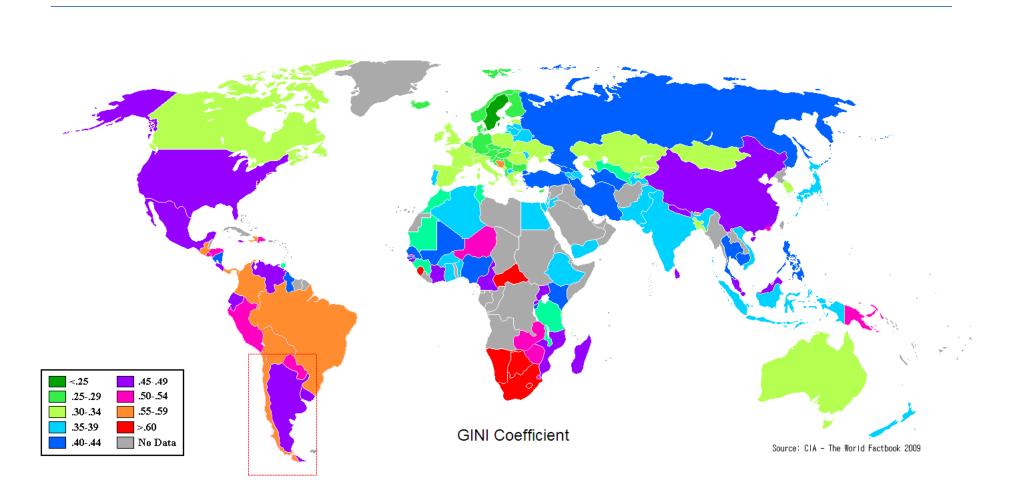
#### **Gross Domestic Product (2010 estimate) Above world average**



Human Development Index (2010): 0.775 (high) (46th)

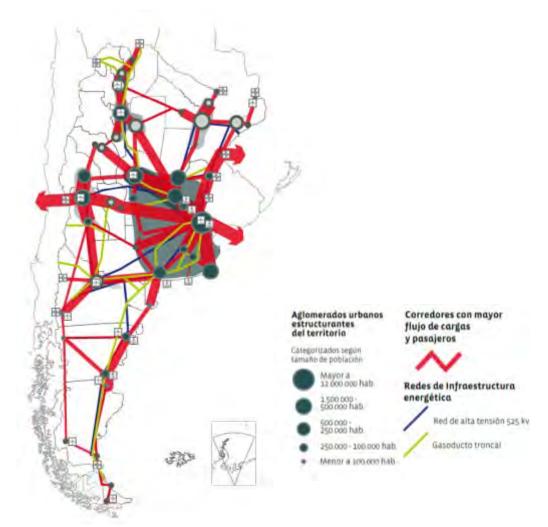


Gini - National income distribution (2009): 45.7 (high inequality)

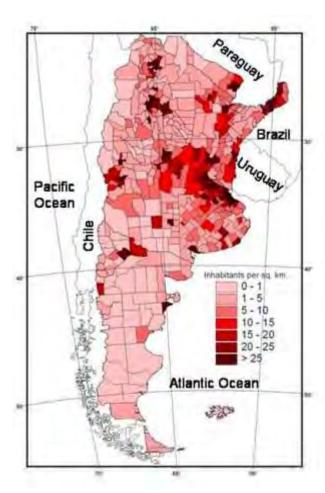


### 1. Argentina's territorial structure

#### **Territorial structure**

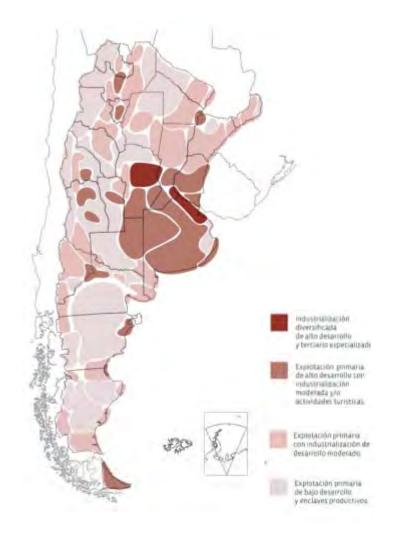


#### **Density (14.49/km2 (207th)**

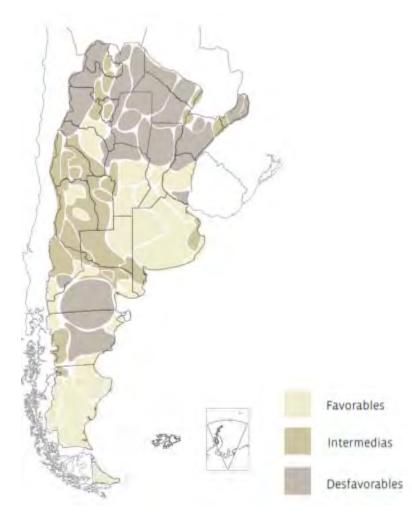


# 1. Argentina's territorial structure

#### **Economy dynamics**



#### **Social conditions**



### 1. Argentina's current situation

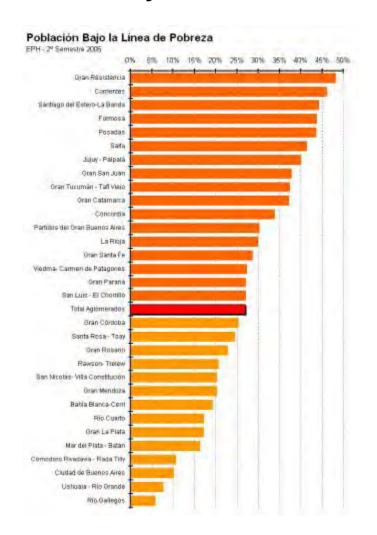
#### **Poverty maps**





# 1. Argentina's current situation

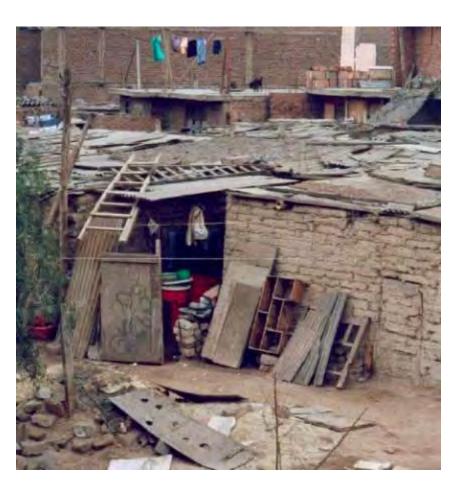
#### **Poverty charts**



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-	At human	th A plants	the better
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Pers, de Sis, Aires			17.8
- Oren Str. Aires	19.3	26,2	
Sons Barca	8.4	22,3	
Onn Lis Plata	13.6	22,1	
-Marcin Plans	11,5	24,6	
Catamarca	25.1	25.6	21,8
Cortolia	14,7		16,0
- Story Circular		25,3	
-Ric Quarte-		12.5	
Contentes	21.4	27,1	23,4
Chase	33,8	14.9	99,4
Chalipt	23.1	18.0	19,6
Entry How			19,1
- Distribuni	20,8	20,4	
- Dorcteda	31.6	20,4	
Fermus	32,0	14,3	26.3
holey	44.2	21,1	.22,5
La Pumpe	13.1	21,4	14.6
An Propa	26.2	37,5	21.8
Mentings	19,0	12,7	15,9
Ministers	19	13.8	20,8
Nesquen	17,7	20,9	13,6
Rio Ringer	44	4/4	10.7
Kalta	22.5	20,9	21,9
New Jean-	20.2	17,0	21,2
Sen Lais	10,2	15.9	19.8
Santa Over	11.2	3,6	15,6
Secta Fe			16.7
Gan Rosavii	22.A	28,3	
Gran Santa Ne	23,0	23,4	
Ago, stat Kensen	33.5	16,5	16.9
Tarris dut Fungy	8.2	10.5	9.9
Tauman	29.9	23,0	21.2
			Lain

# 1. Argentina's current situation

#### **Slums in Buenos Aires, Argentina**







# 2. Research and Work Experiences related to Infrastructure in Argentina

#### 2. Research and Work related to Infrastructure in Arg.

As an undergraduate student (School of Architecture, University of Buenos Aires)

# 1. Pune region, Jujuy Prefecture

-Improve local potentiality through enforce of local architecture



# 1. Pune region, Jujuy Prefecture

-Local potential improvement









#### 1. Pune region, Jujuy Prefecture

-Local potential improvement

#### 1.Background

-A exchange between students and local residents where, while learning from each other, they did construction work and improvements to marginal homes with the technical direction of local builders.

#### 2. Aim and Methodology

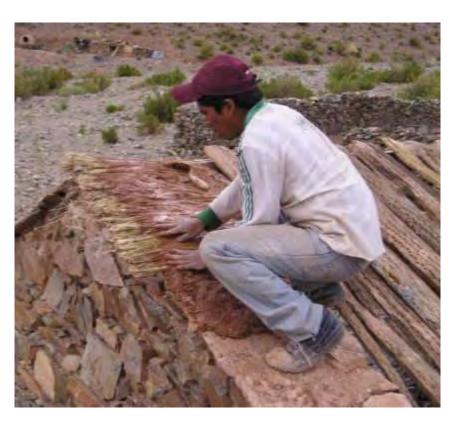
-The aim was to reflect on the role of fieldwork in learning, and how to incorporate different forms of knowledge and teaching, in the context of university education. The project was structured around three stages that involve: areas of training, fieldwork and reflection.

#### 3. Outcome

-36 students and teachers participated in two campaigns, involving a total of 7 local organizations and more than fifty people. The contribution of designers, anthropologists, archaeologists and sociologists, among others, fostered interdisciplinary discussion and learning.

# 1. Pune region, Jujuy Prefecture

-Local potential improvement





#### 2. Research and Work related to Infrastructure in Arg.

As an undergraduate student (School of Architecture, University of Buenos Aires)

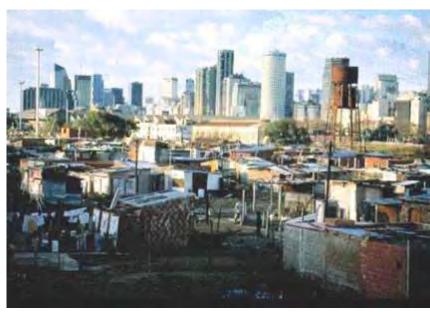
### 2. «Hidden City» Slum, **Buenos Aires**

-Consensus building among citizens, government and institutions

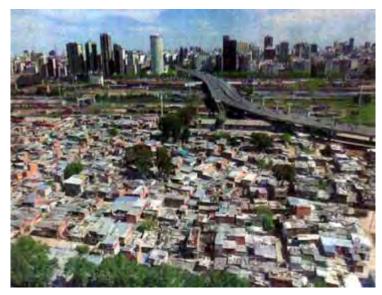


### 2. «Hidden City» Slum, Buenos Aires

-Consensus building among citizens, government and institutions









### 2. «Hidden City» Slum, Buenos Aires

-Consensus building among citizens, government and institutions



#### 1. Aim and Methodology (Qualitative)

The spatial and social conformation of the slum was studied through Literature review

Field survey

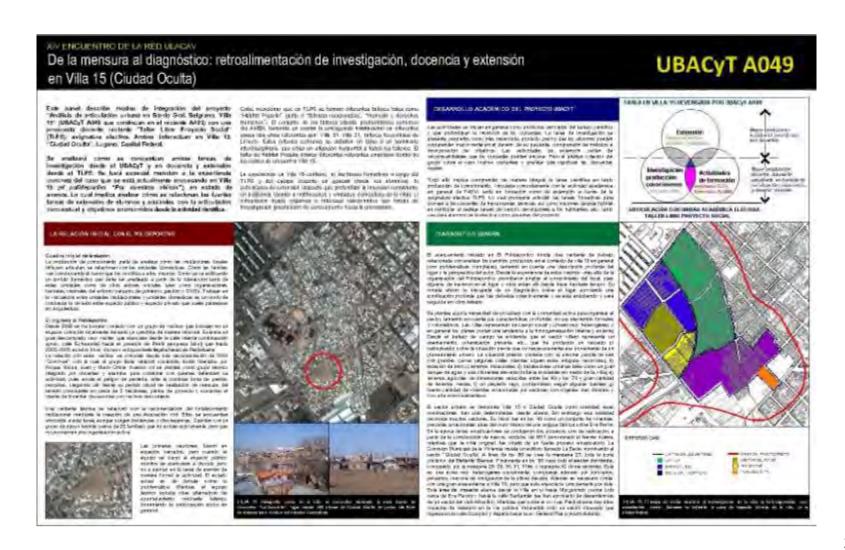
Collaboration with local community organizations

#### 2. Findings and conclusions

- We found 4 main different zones that altogether conformed the slum
- Each one of this zones correspond to an specific issues and historical background, whose need to be address separately

#### 2. «Hidden City» Slum, Buenos Aires

-Consensus building among citizens, government and institutions



#### 2. Research and Work related to Infrastructure in Arg.

As an intern and architect (Ministry of Federal Planning of Argentina)

#### 3. Chaco Prefecture

-Establishing the cooperative mechanism between local government and residents



# Slum's habitat improvement through consensus building among local residents



#### **Main activities**

Slum`s Housing Improvement

- Public debates in local communities
- Training local citizens to work in construction



Slum's Habitat Improvement

- Consensus building on community development projects
- Design, evaluation and follow up of habitat improvement projects

#### 3. Chaco Prefecture

-Cooperative mechanism between local government and residents



#### 3. Chaco Prefecture

-Cooperative mechanism between local government and residents



#### 3. Chaco Prefecture

-Cooperative mechanism between local government and residents



# 3. Research Theme in Japan

#### **Basic Idea of Research**

# Theoretical Foundations

1. Why is important to develop a methodology to evaluate public opinion building processes?

#### Research Methodology

2. Which approach is more suitable to analyze the data obtained from public debates?

# Example of Application

3. How can we use ontology engineering to represent the dynamic of the public debate?

# 1. Why is important to develop a methodology to evaluate public opinion building processes?

Public Involvement (PI) processes

#### New trend, because at Micro Level...

- Diverse perceptions by different members of society
- Judgments related to the appropriateness of public projects

#### But also, at Macro Level...

- Results of Public Involvement (PI) processes can be easily manipulated by powered stakeholders
- Valuable opinions can be often omitted of the debate

There is the necessity to methodology developed to evaluate the *legitimacy* of public opinion building processes at **Macro Level** 

# 2. Which approach is more suitable to analyze the data obtained from public debates?

(In Prof. Kobayashi laboratory there already been developed methodologies for analyzing public debates based on corpus semantic similarity evaluation at **micro level** case)

Micro Level
(isolated debate)

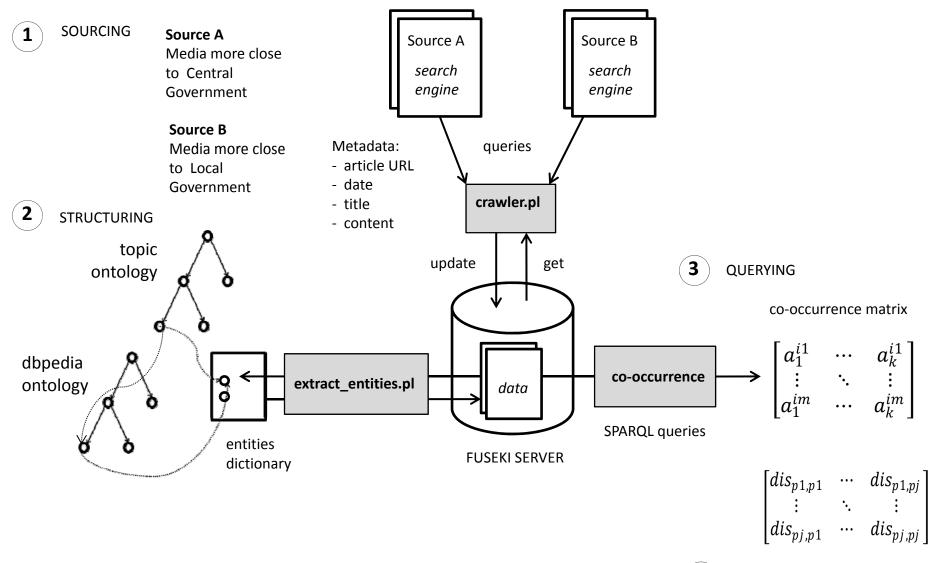
- Corpus Approach: Statistical Data Mining Techniques
  - Frequency of a word
  - Distribution of a word

#### The next step is to develop a methodology for the MACRO LEVEL



- Developing a methodology to analyze how public opinion building processes evolve
- Using an **ontology** approach to relate data from different discursive sources

# 3. How can we use ontology engineering to represent the dynamic of the public debate?



#### My message to you

- To always have a critical thinking, think out of the box
- To never be afraid of trying new things, enhance what you already know
- Exchange and share your ideas
- Study English (and/or Spanish!) to travel and make friends all over the world

# Thank you for your attention! Any Questions?

Fernando (fcorralesbarboza@gmail.com)