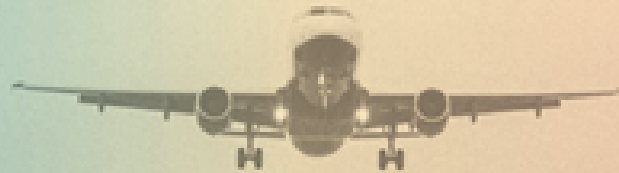


# Quality of life interventions

## Isabelle Richard – ENVIRONNONS

ANIMA HYBRID WORKSHOP

VIENNA, JUNE 22, 2021



### NEW APPROACHES TO MITIGATE AVIATION NOISE IMPACT



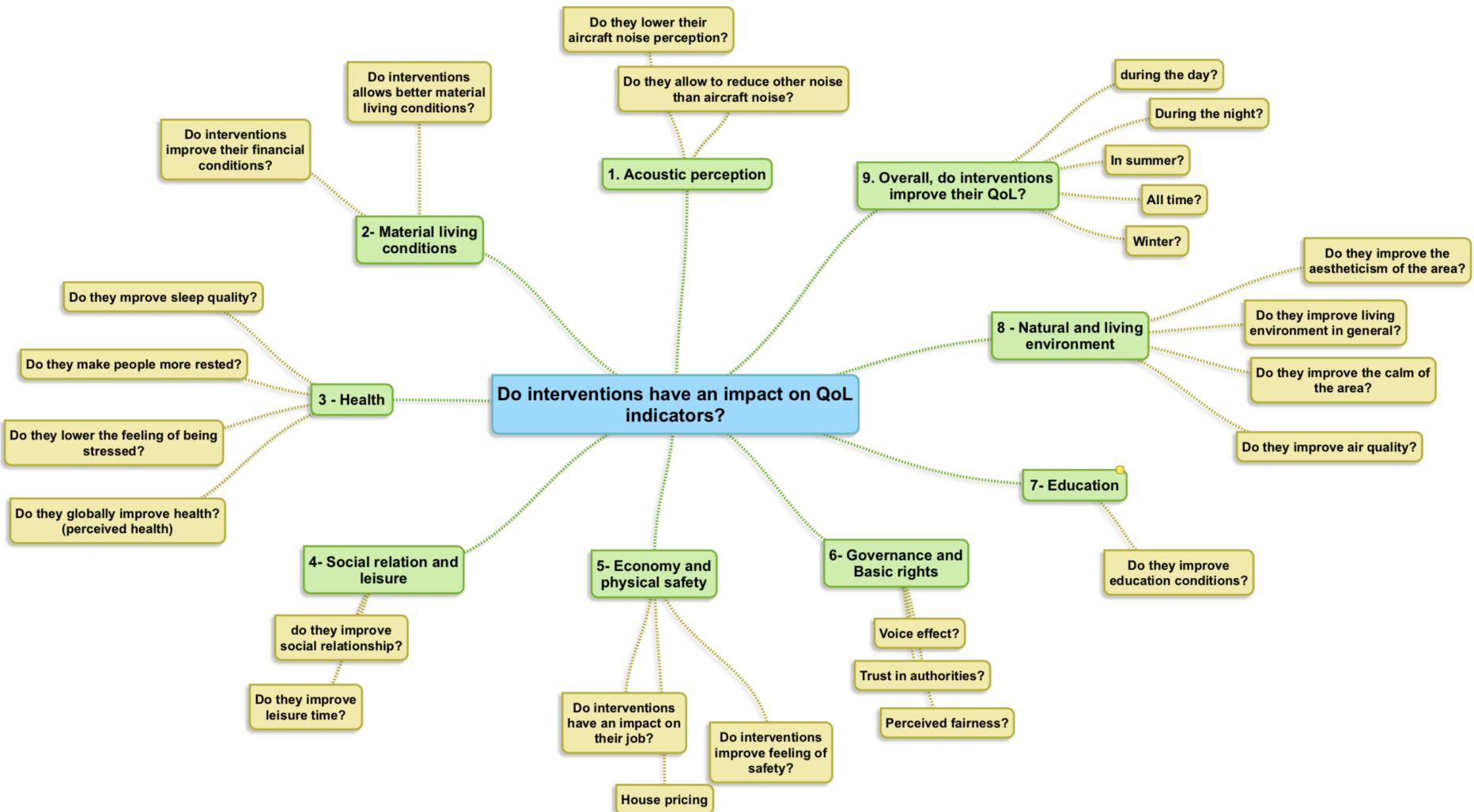
Horizon 2020

# Objective of the task

- **Evaluation of residents' responses to interventions resulting from the balanced approach**
  - Operational procedure
  - Land use planning and management
  - Communication
- **Analyse to what extent efforts that are deployed by airports to have good relationship with neighbours are efficient & well perceived by communities**
  - Do they know the intervention ?
  - Does it improve their quality of life ?
  - Does it lower their annoyance ?

# Research hypothesis

Main question : **Do existing interventions have an impact on QOL indicators ?**



# Team and interventions investigated



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<b>Airport</b>	<b>Frankfurt (FRA)</b>	<b>Heathrow (LHR)</b>	<b>Marseille (MRS)</b>	<b>Schiphol (AMS)</b>
<b>Intervention</b>	Consultation procedure	Sound insulation	Sound insulation	Departure procedure
<b>Pillar of BA</b>	Communication	Land use planning	Land use planning	Operational procedure
<b>Flight movements per year</b>	513.912	476.133	109.894	496.826

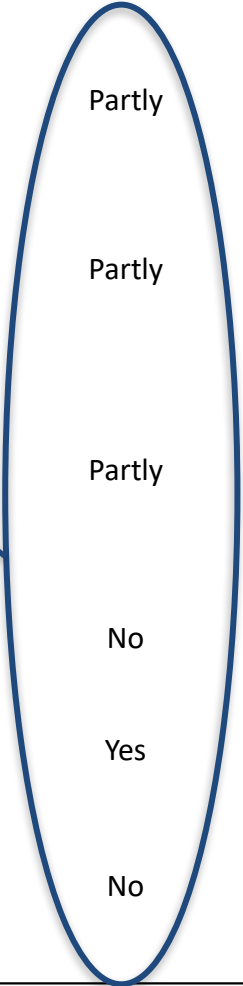
# Methodologies

	Radius to fix approach	Consultation procedure	Insulation scheme in Marseille	Insulation scheme in Heathrow
<b>Tools</b>	Data from a questionnaire	In depth interviews	Focus-Groups	In depth interviews
<b>No. of participants</b>	1212	27	28 divided in 4 groups	10
<b>Type of data</b>	quantitative	qualitative	qualitative	qualitative

# Results for insulation scheme

Interventions studied	QoL indicators	Link with non acoustical-factor	Adressed/non adressed by the intervention	Efficiency of the intervention
<b>Insulation scheme</b>	Acoustic perception	Annoyance Characteristics of sound	x	Partly
	Material living condition Natural and living environment	Residential		Partly
	Overall QoL			
	Health	Sleep distur Fear for hea Stress		Partly
	Social relationship and leisure	Social behavior	x	No
	Education			
	Economy and physical safety	Fear for house pricing decrease	x	Yes
	Governance and basics rights	Voice effect Trust in authorities Perceived fairness	x	No

**Possibility of learned helplessness  
Important to focus the intervention on more than noise impact only**



# Results for consultation procedure

Interventions studied	QoL indicators	Link with non acoustical-factor	Adressed/non addressed by the intervention	Efficiency of the intervention	
Consultation procedure	Acoustic perception	Annoyance Characteristics of sound			
	Material living condition				
	Natural and living environment	Residential satisfaction			
	Overall QoL				
	Health	Sleep disturbance			
		Fear for health impact			
	Social relationship and leisure	Stress			
		Social behavior			
	Education				
	Economy and physical safety	Fear for house pricing decrease			
Governance and basics rights	Voice effect				
	Trust in authorities		X	Partly	
	Perceived fairness				

**Better shape the participation procedure (Arnstein,1971)**

# Results for radius-to-fix procedure

- Shape of results different from the other interventions as the **data were already collected** for another study
- **No clear impact on quality of life** in general
- People report a **quite high residential satisfaction** (inner, outer area and area outside noise contour)
  - But still **differences between people who live closer to the airport** (Inner/outer and area outside noise contour), who report less residential satisfaction (although it's still high)
  - Feel more annoyed by aircraft noise
  - Report more sleep disturbance from aircraft noise than from other transport modes



# Conclusion

- Actual interventions are not design to adress QoL because they are not well known
- If adressed, interventions have no a huge impact on these QoL indicators
- Actual interventions are mostly only based on noise reduction but other things can bother people (see non acoustical-factors)
- Interventions only adress tokenism participation rather than citizen power process

# How to better address quality of life in designing interventions ?

- **Participation/Fairness** (capacity of the intervention to better include residents in the decision-making process)
- **Health** (capacity of the intervention to lower the pollution, noise, and stress effects of air traffic and to improve sleep of residents)
- **Social life and leisure** (capacity of the intervention to lower the impact of air traffic on these activities)

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# Thank you for your attention !

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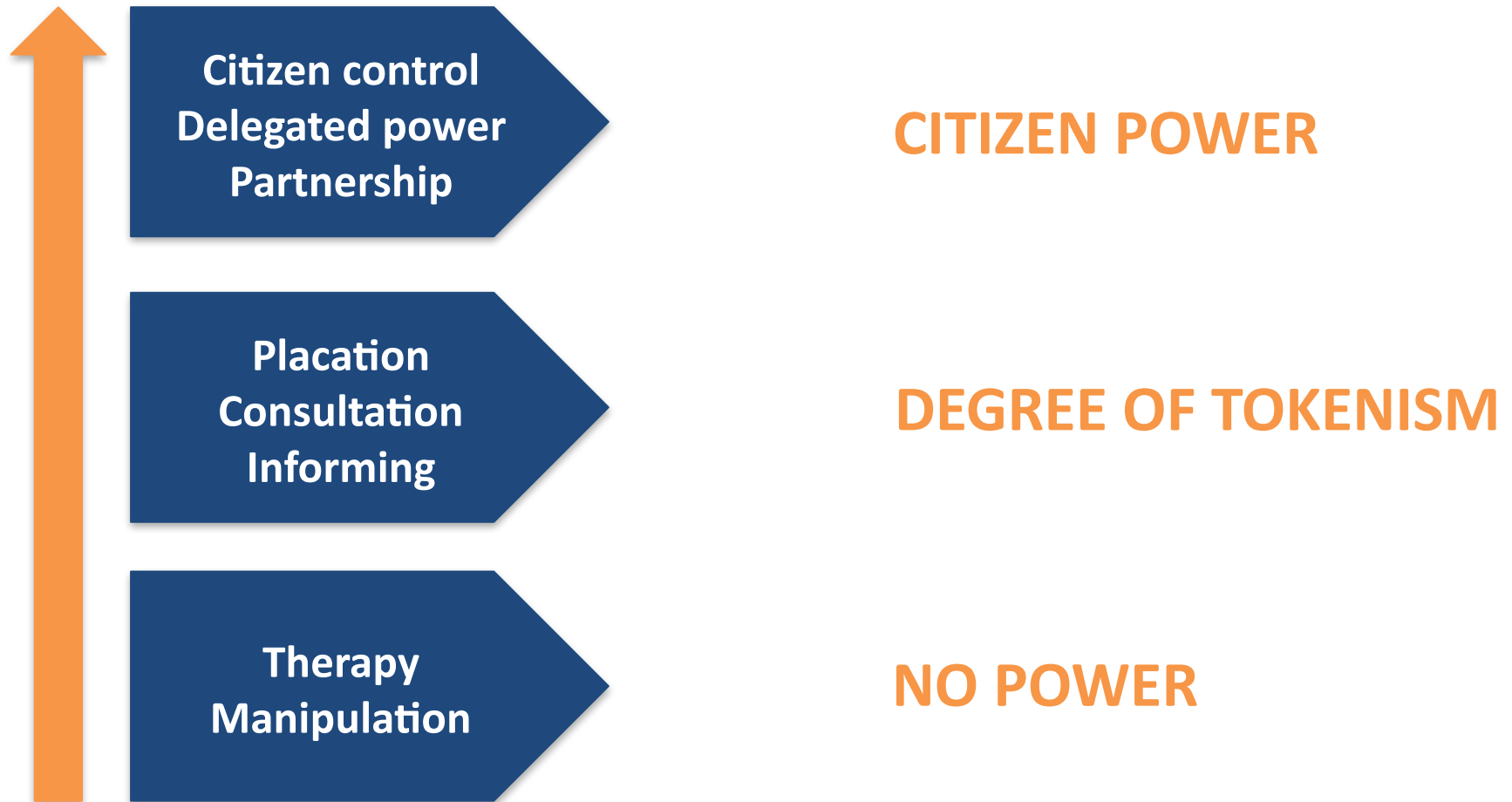
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# EXTRA SLIDES



# Arnstein scale of participation (1971)



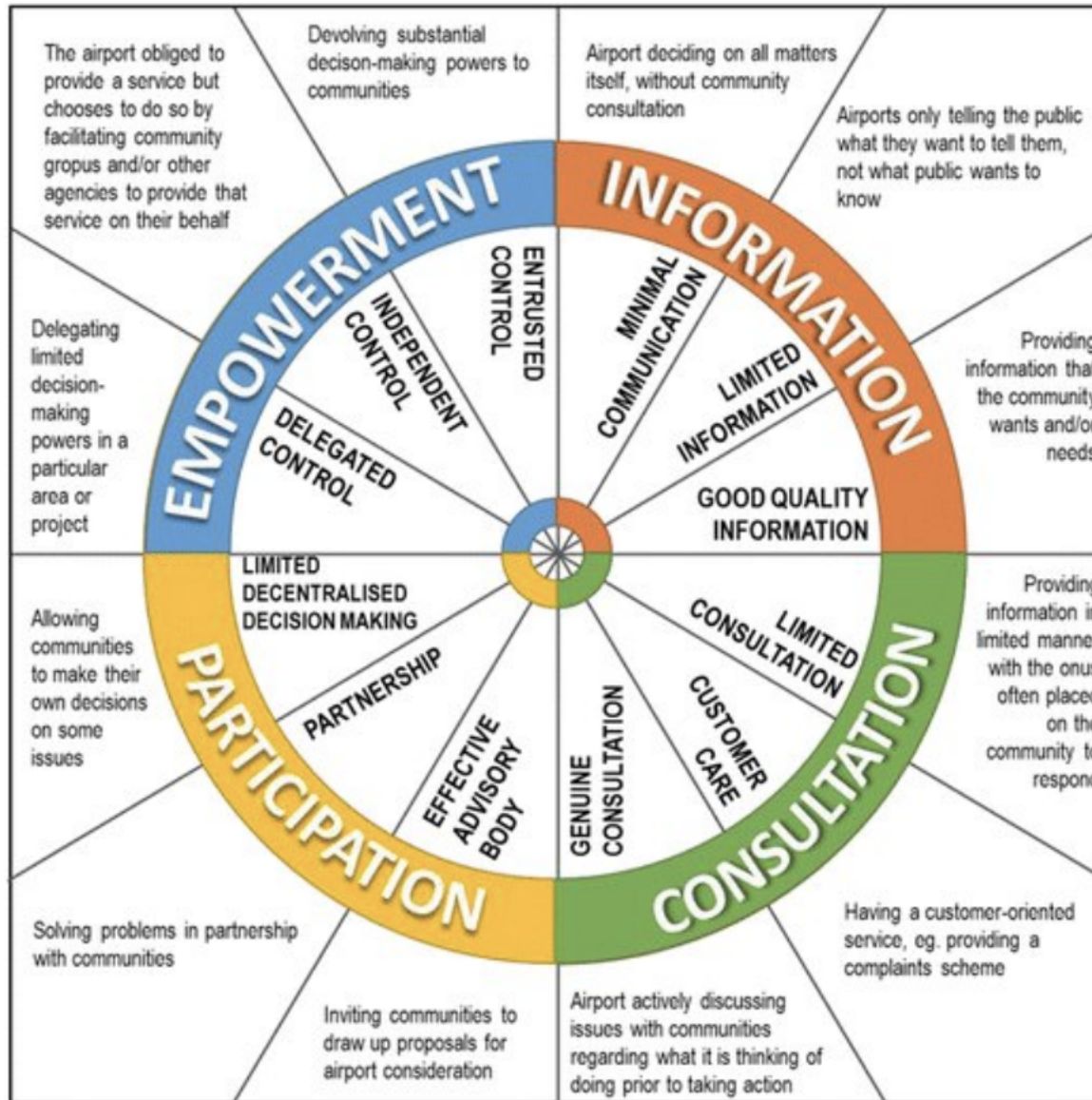


Figure X: Asensio et al (2017) Wheel of Public Participation.