

Quality of life interventions

Isabelle Richard – ENVIRONNONS

ANIMA HYBRID WORKSHOP

VIENNA, JUNE 22, 2021

NEW APPROACHES TO MITIGATE
AVIATION NOISE IMPACT

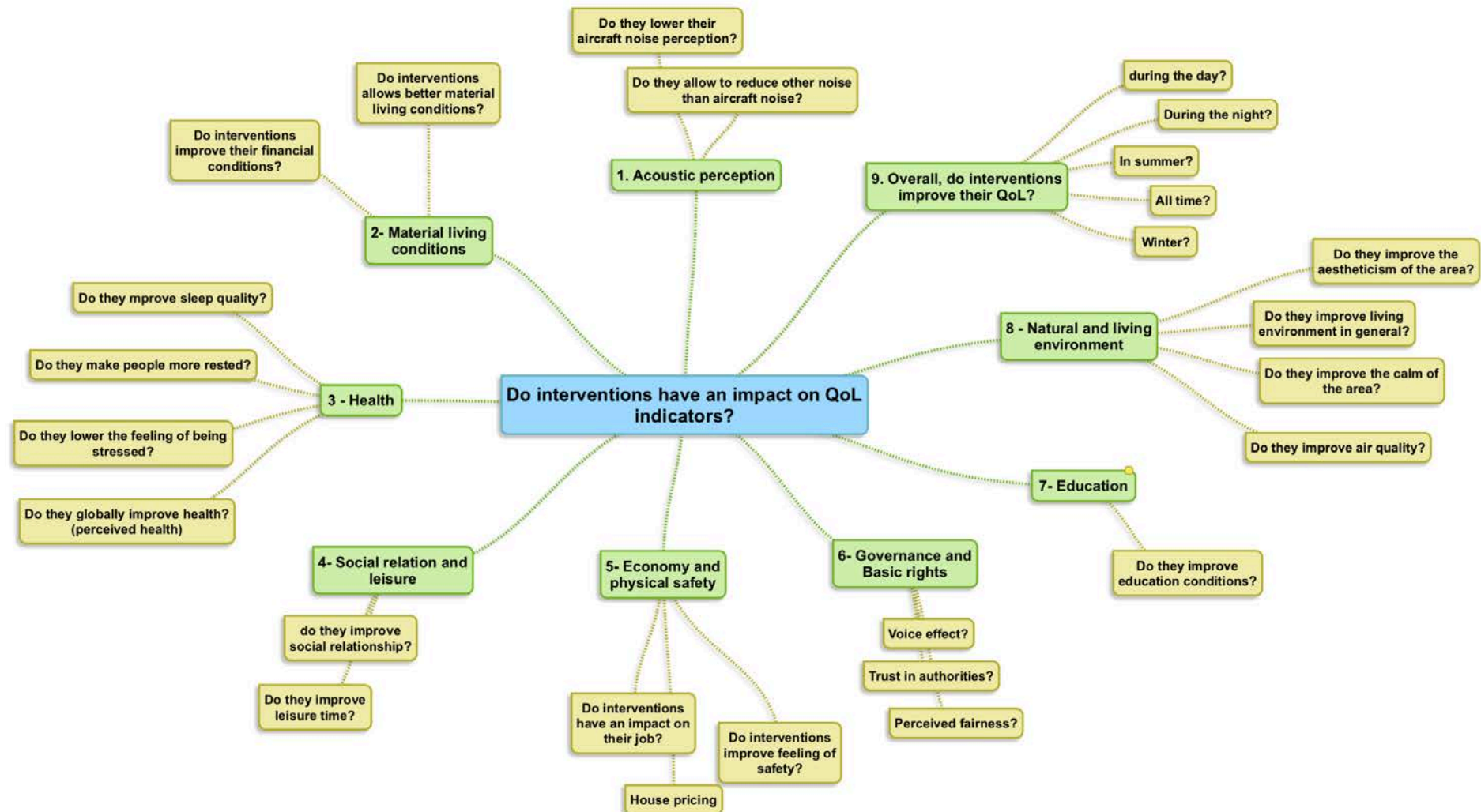
Objective of the task

- **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



Barbara Ohlenforst



Julia Kuhlmann



Isabelle Richard



Fiona Raje

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

Methodologies

	Radius to fix approach	Consultation procedure	Insulation scheme in Marseille	Insulation scheme in Heathrow
Tools	Data from a questionnaire	In depth interviews	Focus-Groups	In depth interviews
No. of participants	1212	27	28 divided in 4 groups	10
Type of data	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
Insulation scheme	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 adressed 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		
		Stress		
	Social relationship and leisure	Social behavior		
	Education			
	Economy and physical safety	Fear for house pricing decrease		
	Governance and basics rights	Voice effect Trust in authorities Perceived fairness	X	Partly

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)
- **Living environment** (capacity of the intervention to address the indoor AND the outdoor impact of air traffic)

ANIMA HYBRID WORKSHOP

VIENNA, JUNE 22, 2021



NEW APPROACHES TO MITIGATE AVIATION NOISE IMPACT



Thank you for your attention !

Contact: Isabelle Richard
isabelle.richard@environnons.com
Phone: +33 621 886 609

30-Jun-21



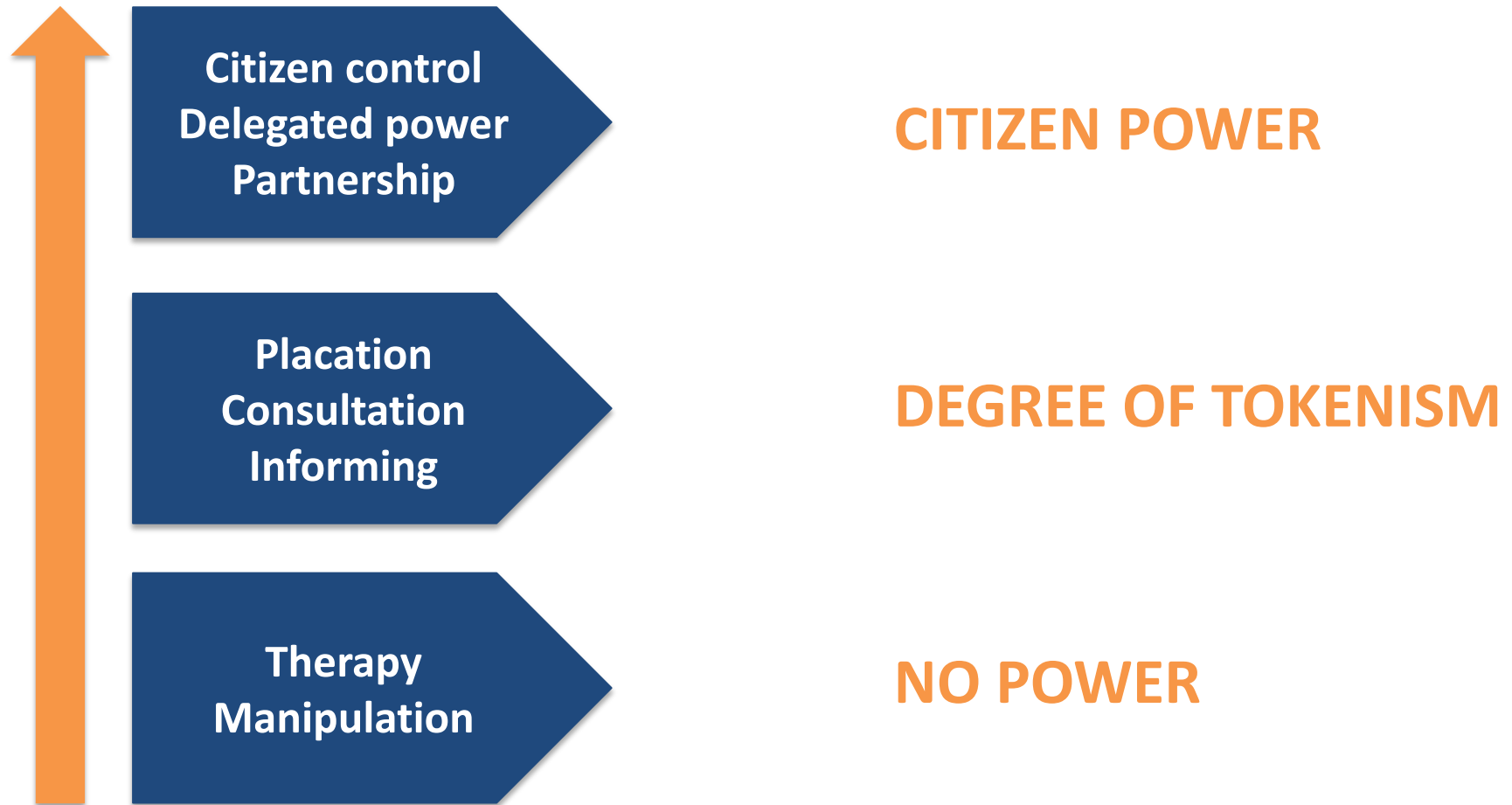
This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No [769627]



Horizon 2020

EXTRA SLIDES

Arnstein scale of participation (1971)



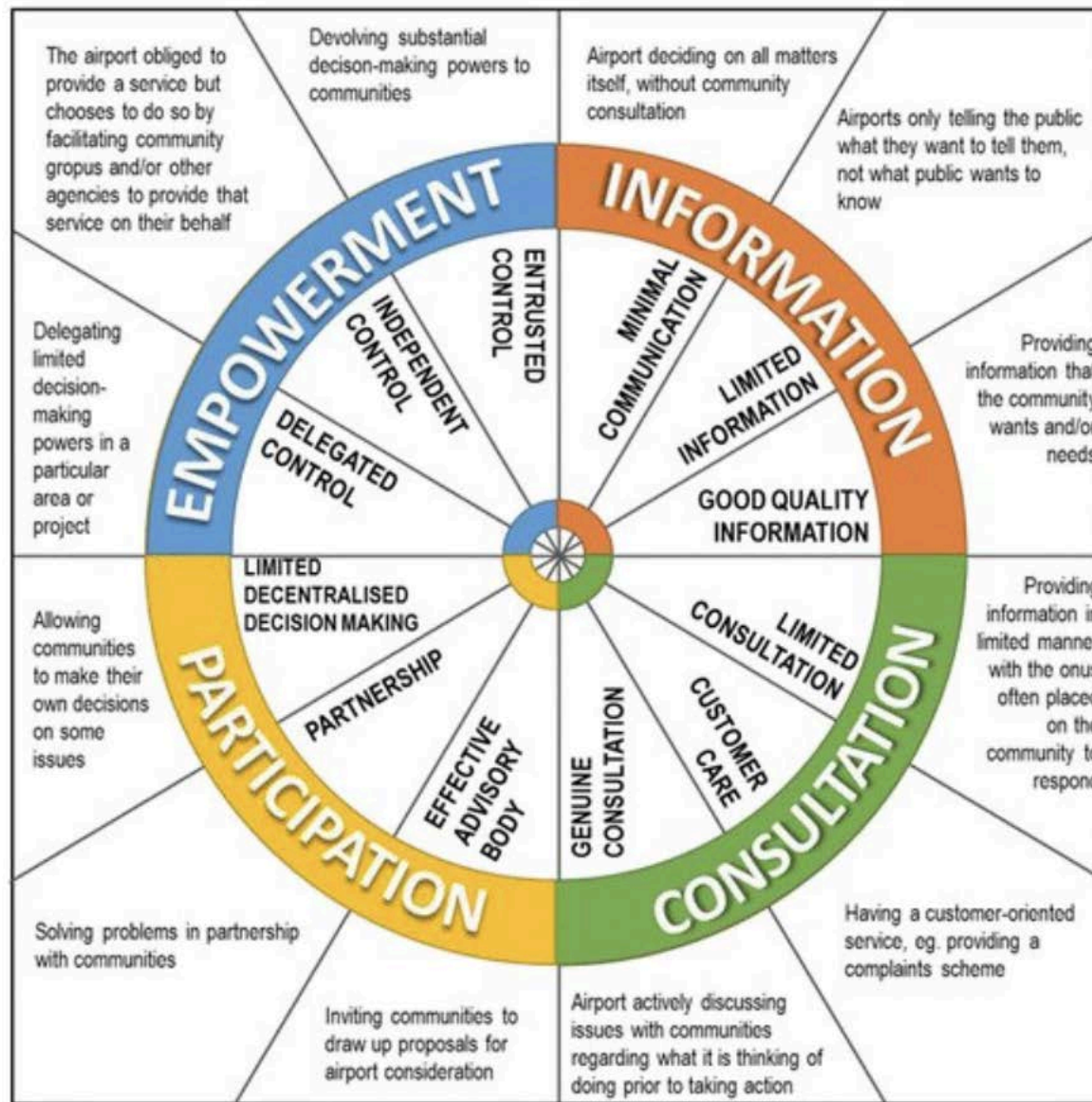


Figure X: Asensio et al (2017) Wheel of Public Participation.