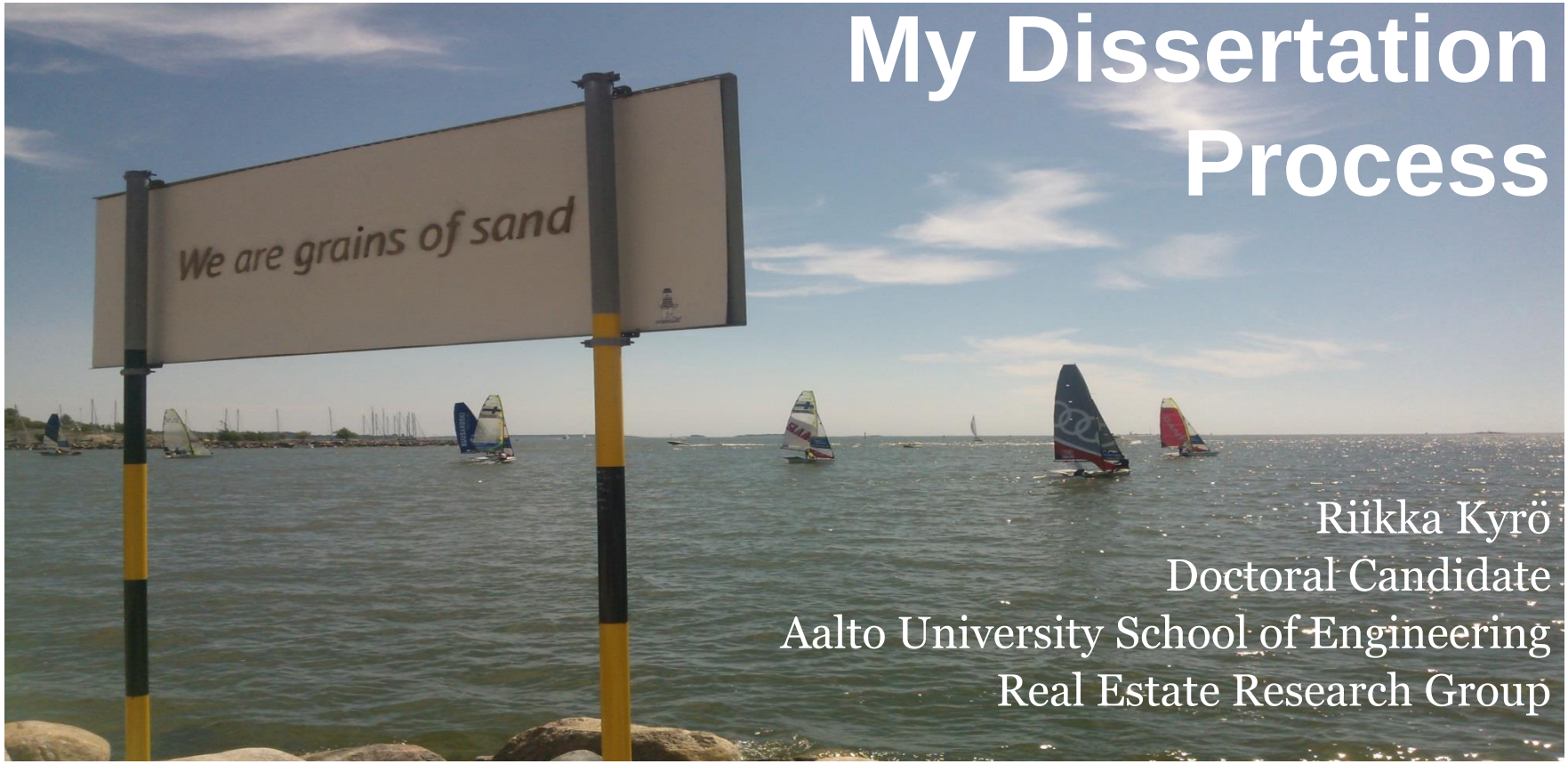
Aalto University
School of Engineering



My Dissertation Process

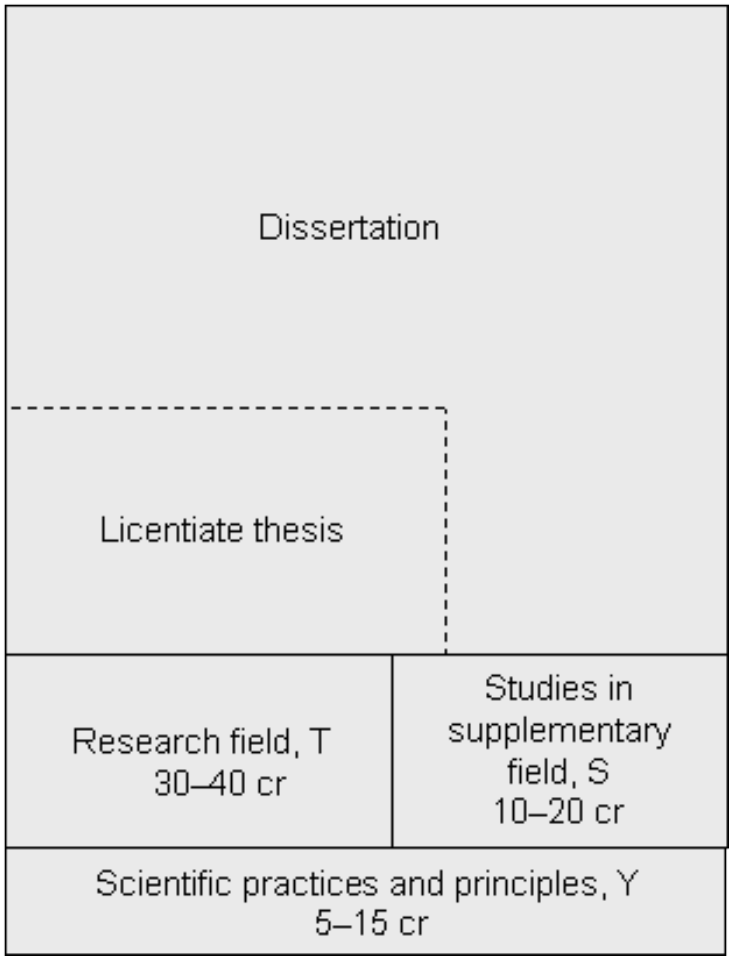
Riikka Kyrö
Doctoral Candidate
Aalto University School of Engineering
Real Estate Research Group

ERES Educational Seminar
Design Factory
Espoo, Finland

30 Nov 2012

riikka.kyro@aalto.fi

Structure of Doctoral Studies



Studies

vs.

Research

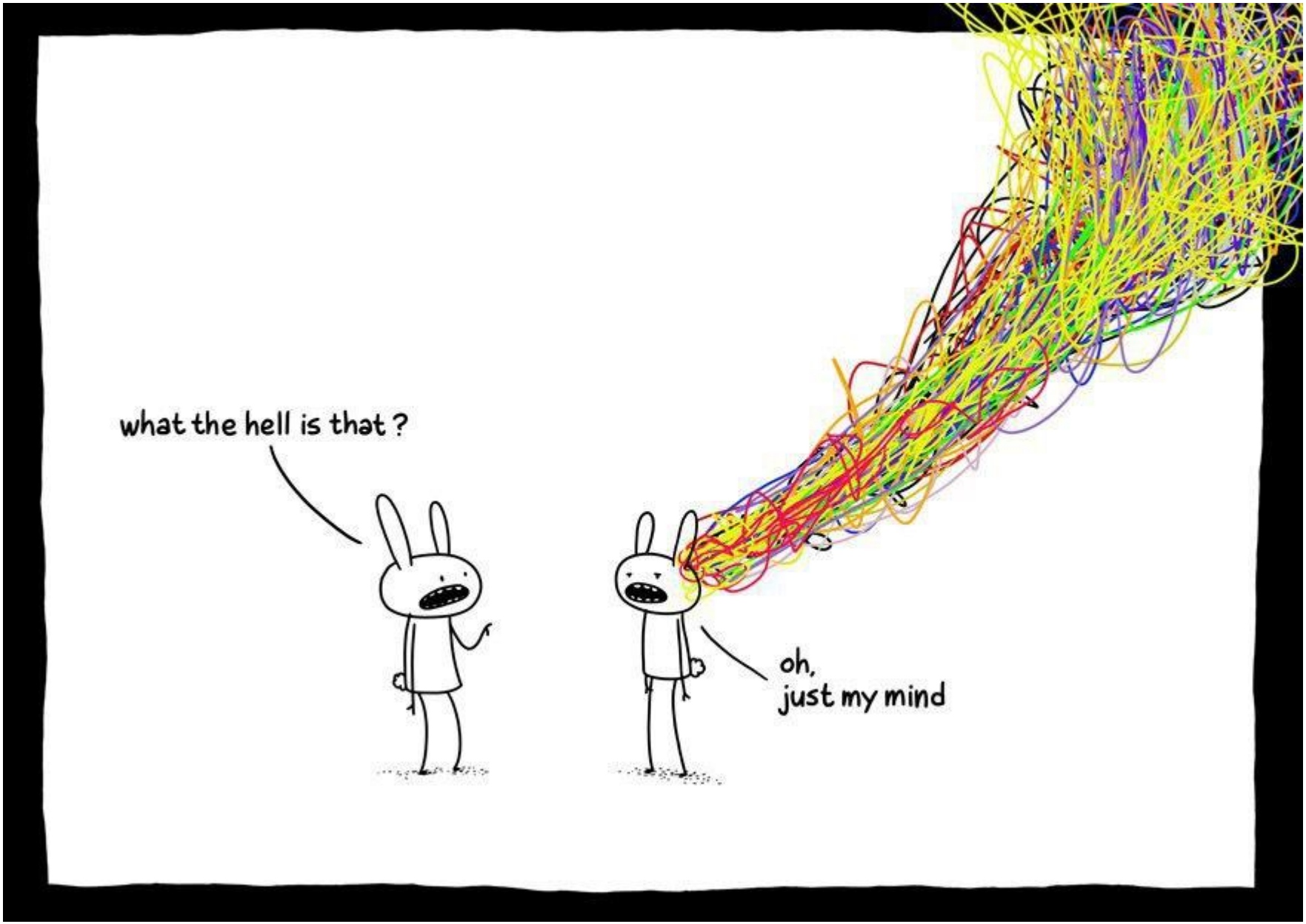
vs.

Teaching

vs.

Project work

Doctoral candidate process and schedule


what the hell is that ?
oh,
just my mind

Paper I: Heinonen, Jukka; Kyrö, Riikka; Junnila, Seppo (2011): Dense downtown living more carbon intense due to higher consumption: a case study of Helsinki, Environmental Research Letters, 6, 034034.

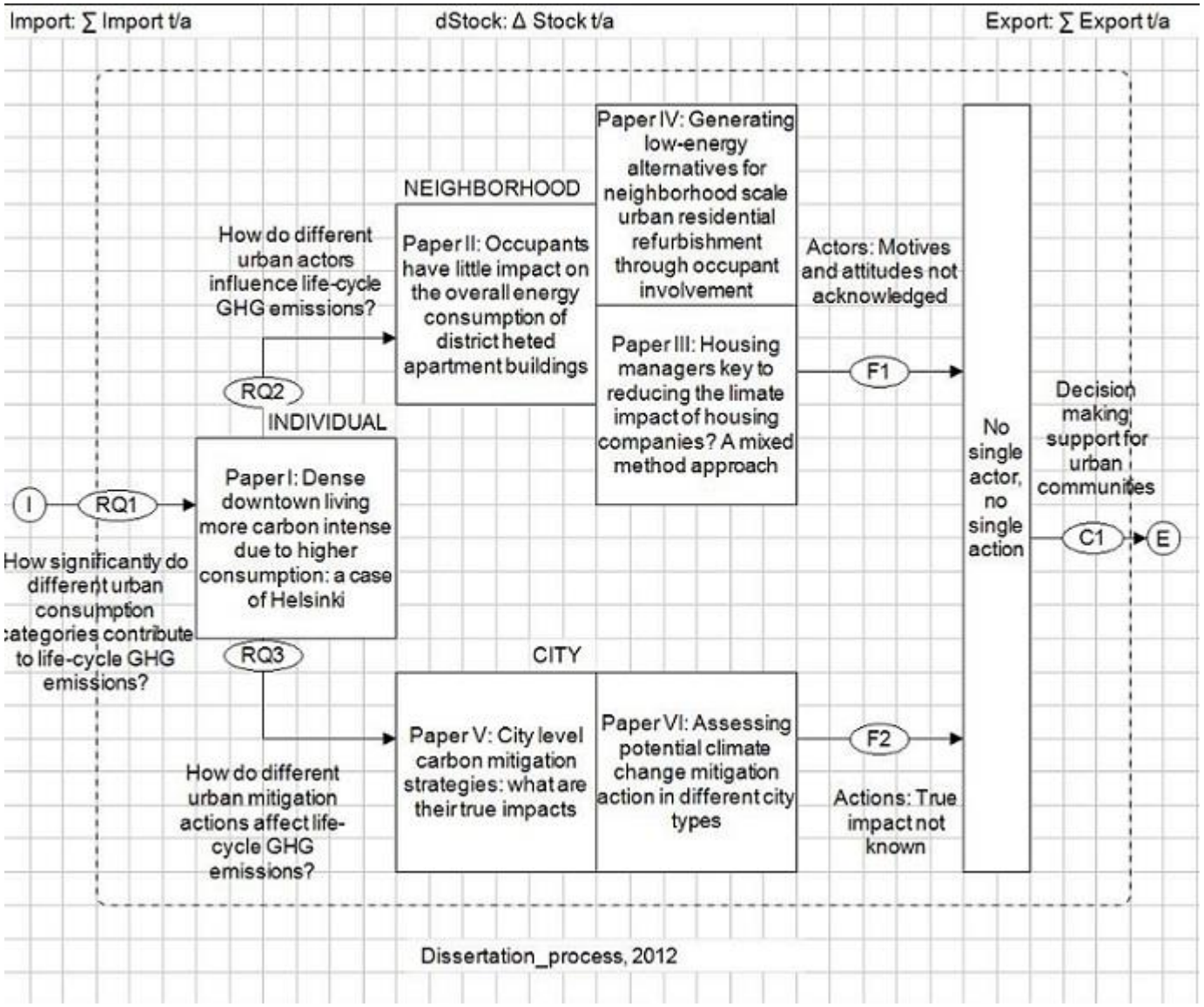
Paper II: Kyrö, Riikka, Heinonen, Jukka; Säynäjoki, Antti; Junnila, Seppo (2011): Occupants have little influence on the overall energy consumption in district heated apartment buildings, Energy and Buildings, 43, 3484–3490.

Paper III: Kyrö, Riikka, Heinonen, Jukka; Junnila, Seppo (2012): Housing managers key to reducing the climate impact of housing companies? A mixed method approach, Building and Environment, 56, 203-210.

Paper IV: Kyrö, Riikka; Karhu Jessica; Kuronen, Matti, Junnila, Seppo (2012): Generating low-energy alternatives for neighborhood-scale urban residential refurbishment through occupant involvement, Proceedings of the CIBW070 Conference, January 2012, Cape Town, South Africa.

Paper V: Kyrö, Riikka; Heinonen, Jukka; Säynäjoki, Antti; Junnila, Seppo (2012): Assessing the Potential of Climate Change Mitigation Actions in Three Different City Types in Finland, Sustainability, 4(7), 1510-1524

Journal	**ISI IF***	**SCOPUS SJR/SNIP****
Environmental Research Letters	3.631	0.152/1.416
Energy and Buildings	2.386	0.080/3.105
Building and Environment	2.400	0.080/2.609
Sustainability	not listed	0.026/0.107


Import: ∑ Import t/a
dStock: Δ Stock t/a
Export: ∑ Export t/a
NEIGHBORHOOD
Paper IV: Generating low-energy alternatives for neighborhood scale urban residential refurbishment through occupant involvement
How do different urban actors influence life-cycle GHG emissions?
Paper II: Occupants have little impact on the overall energy consumption of district heted apartment buildings
Actors: Motives and attitudes not acknowledged
Paper III: Housing managers key to reducing the limate impact of housing companies? A mixed method approach
F1
RQ2
INDIVIDUAL
No single actor, no single action
Decision making support for urban communities
I
RQ1
Paper I: Dense downtown living more carbon intense due to higher consumption: a case of Helsinki
C1
E
How significantly do different urban consumption categories contribute to life-cycle GHG emissions?
RQ3
CITY
Paper V: City level carbon mitigation strategies: what are their true impacts
Paper VI: Assessing potential climate change mitigation action in different city types
F2
How do different urban mitigation actions affect life-cycle GHG emissions?
Actions: True impact not known
Dissertation_process, 2012

The general research aim is to assess climate change mitigation potential in urban environments

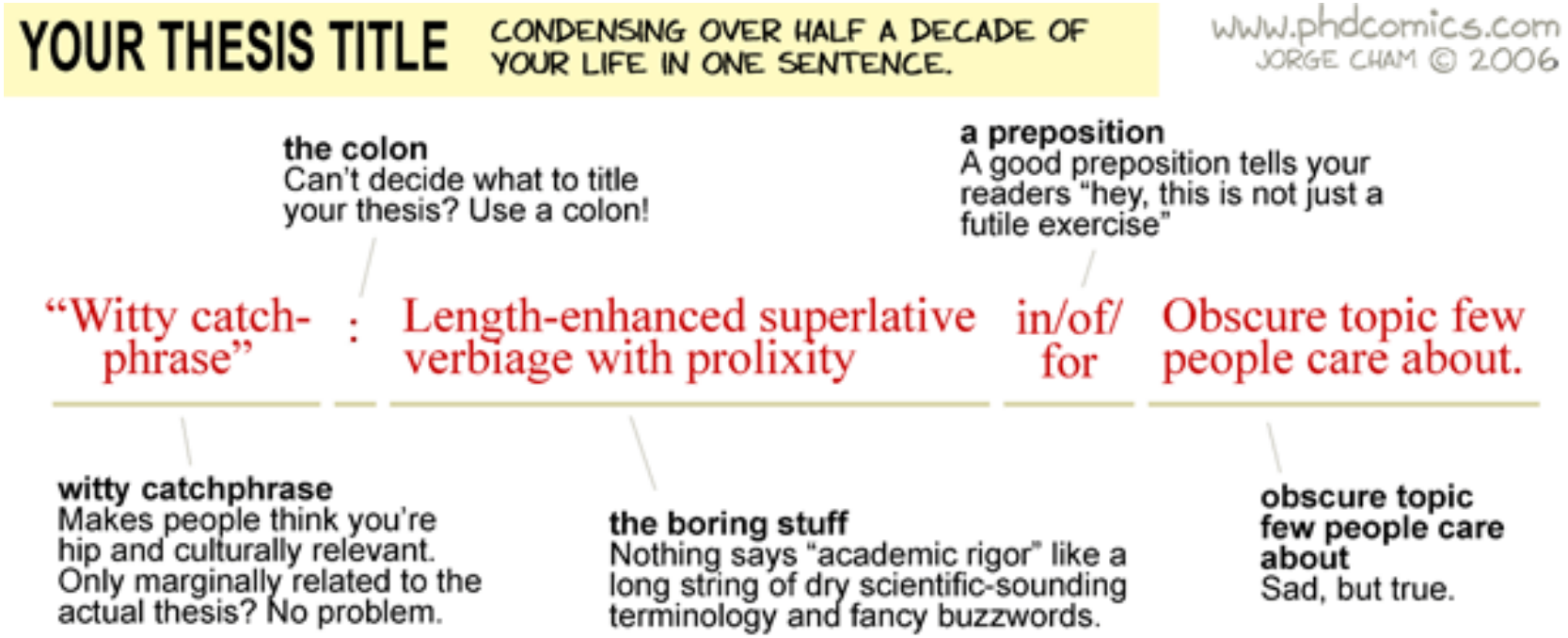
City
Policy maker

Neighborhood
Occupant - Manager

Individual
Consumer

	Paper I	Paper II	Paper III	Paper IV	Paper V	Paper VI
Title	Dense Downtown Living More Carbon Intense Due to Higher Consumption: Case Study of Helsinki	Occupants have little influence on the overall energy consumption in district heated apartment buildings	Housing managers key to reducing the climate impact of housing companies? A mixed method approach	Generating low-energy alternatives for urban residential development.. through occupant involvement	City level carbon mitigation strategies: What are their true impacts?	Climate change mitigation action in different city types - assessing the true effect
Scale	Individual	Neighborhood	Neighborhood	Neighborhood	City	City
Finding	Housing related emissions form the majority of an individual's carbon footprint independent of the type of urban structure.	Managers controlling the heating system may have a more crucial role in mitigating climate change than the individual occupants.	Different manager types exist and managers' attitudes and practices may have an impact on the energy use and GHG emissions.	Occupants prioritize individual preferences; housing management understands the whole, and promotes energy-efficiency.	Currently preferred mitigation actions have varying levels of reduction potential, magnitudes should be understood.	The reduction potential of currently preferred mitigation actions varies, based on e.g. the type of urban community.
Actors	Consumer	Occupant	Manager	Occupant Manager Policy maker	Policy maker	Policy maker
Actions	Urban density	Building energy-efficiency	Building energy-efficiency	Building energy-efficiency Urban density	Energy production Urban density Low-energy construction	Energy production Urban density Low-energy construction Building energy-efficiency

Are the Right Actors Taking the Right Action? Climate Change Management in Finnish Urban Housing



Actors

Lot of attention is paid on the impact of occupant behavior, not enough is placed on:

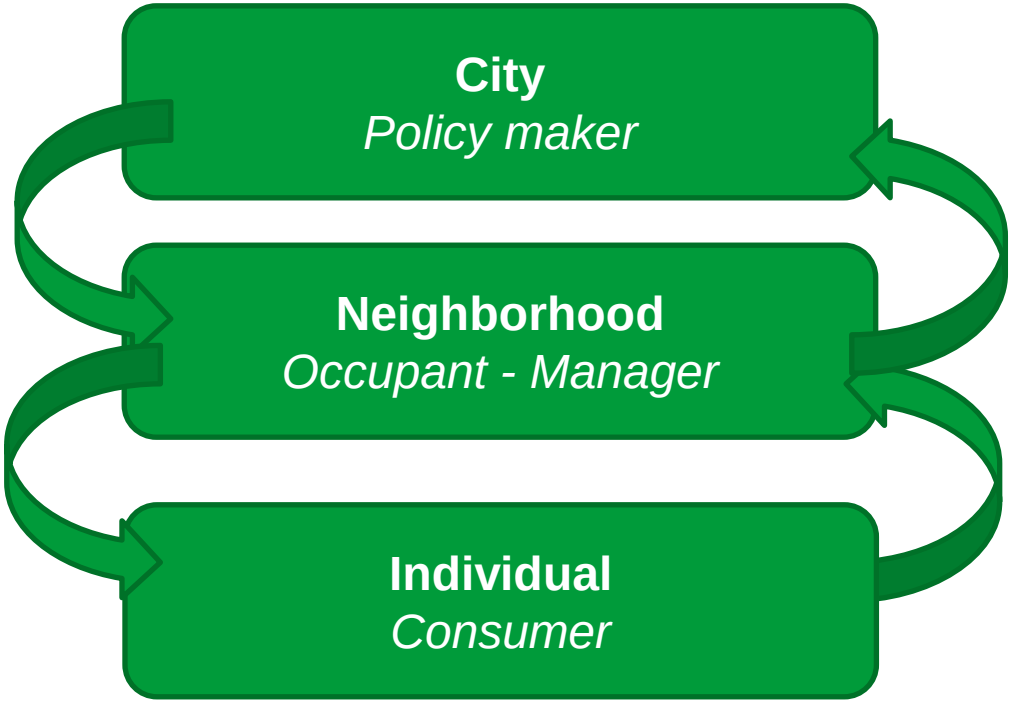
1. housing management practices and attitudes;
2. consumer preferences, or;
3. ways to steer the above two into an environmentally sound direction.

Actions

Commonly accepted urban mitigation actions are adopted without full knowledge of their actual (global consumption-based life-cycle) GHG impacts.

While urgent mitigation action is needed, impact assessment remains essential in order to avoid void action.

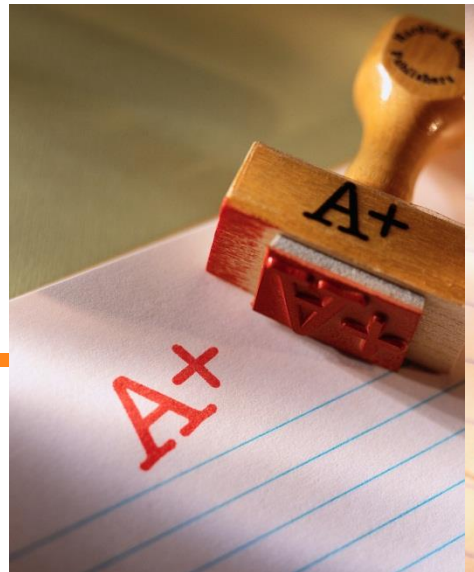
No single action, no single actor will suffice in mitigating the climate change impact of urban communities

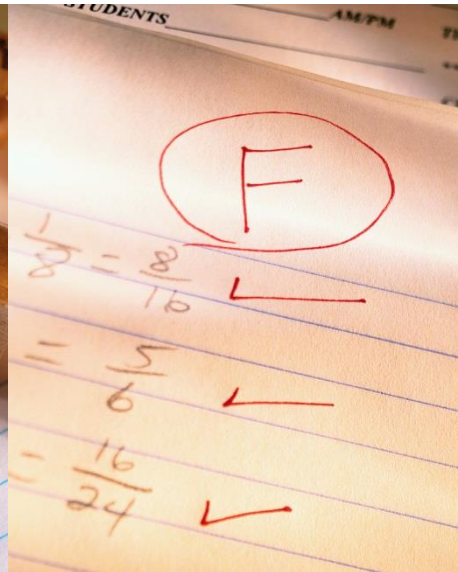


The Preliminary Examination

- Advisor recommends two experts in the research field as preliminary examiners (must be active publishers)
- CV and publications lists evaluated by the Doctoral Program Committee which appoints the pre-examiners
- Pre-examiners given two months to complete the review
- Statements may suggest:

  no / minor / moderate / significant / extensive revision



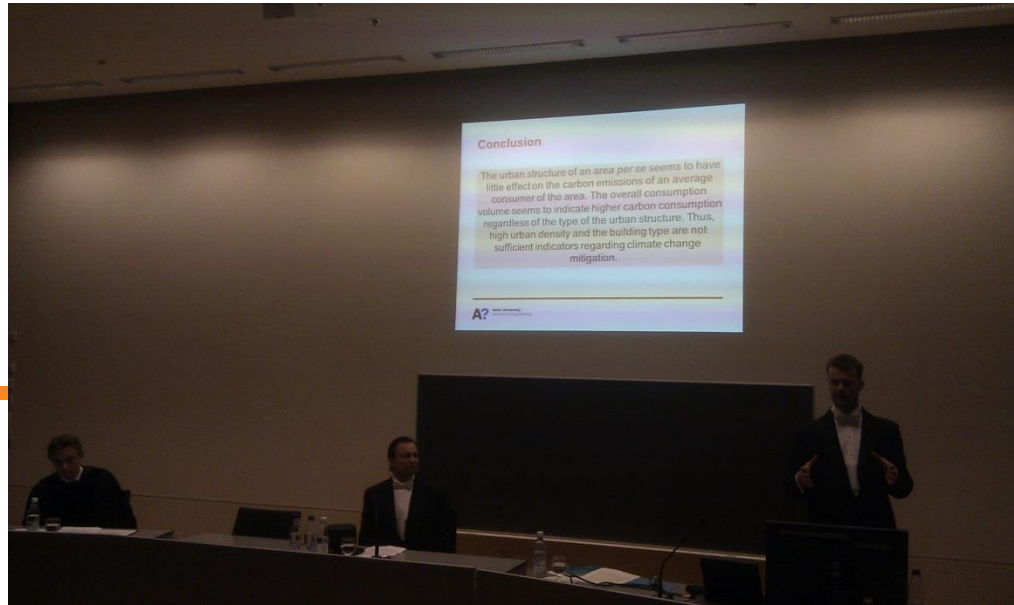


The Public Examinaton (The Defence)

- After revisions, permission to publish
- 11 days public display
- Defence may be scheduled

- Advisor suggests an Opponent(s)
- Opponent selects the date
- Friday is the day of public examinations at Aalto

- Supervisor acts as Custos in the defense
- Highly ceremonial and formal with a strict dress code
- Public is also welcome



The PhD Degree

After a successful defence, a degree diploma is issued at he next graduation ceremony

Provided:

1) all studies are complete;

2) no unpaid library fees