START YOUR CAREER IN RESEARCH

Professional development, international mobility, and other tips

Yannick Cornet

EURAXESS Slovakia (SAIA), ERAdiate project

University of Žilina

Tuesday 12 June 2018

Presentation plan – Research career

- Planning
  - Starting with a vision
- Purpose
  - What matters in 2018
- Tips
  - What worked for me

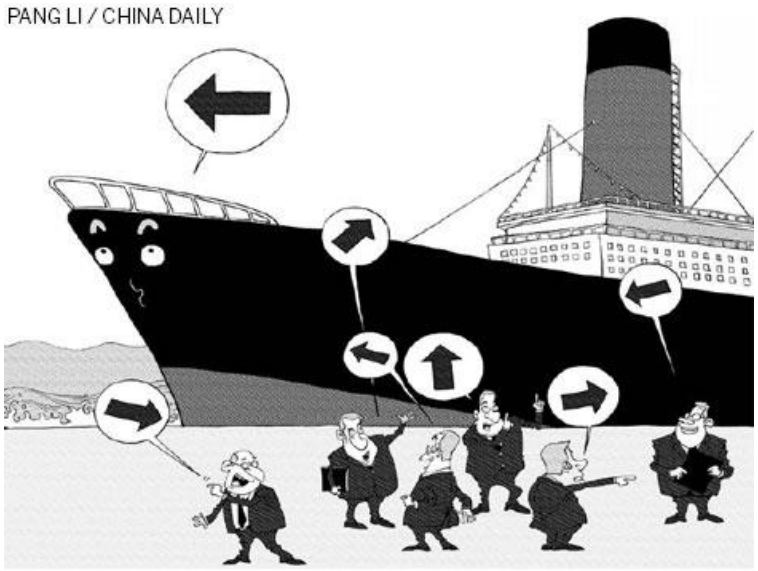
Who I am

- Yannick Cornet, PhD, PMP, Eng.
- Thesis on Transport Systems:
  Indicators and beyond: Assessing the sustainability of transport projects
  Department of Transport, Technical University of Denmark 2013 – 2016

Concepts

Tools

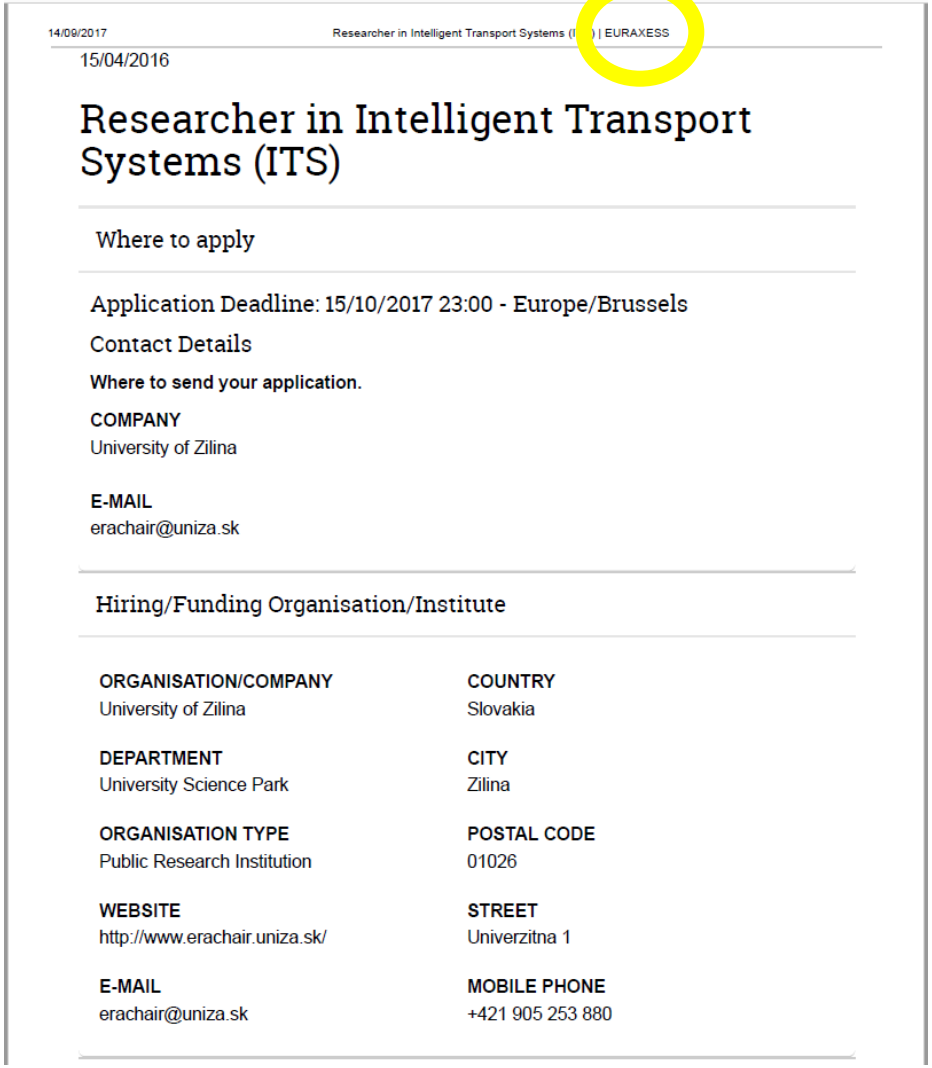
Governance



Career Planning

How did I get here

- 2018 Žilina (SK)
- 2016 Start Postdoc
- 2013 Start of PhD
- 2011 Start Masters degree
- 2006 Nokia China (4½ yrs)
- 2003 Start at Nokia
- 2000 Arrive in Denmark
- 1997 Start career
- 1992 Start bachelor
- 1982 Emigrate to Canada
- 1973 Born (BE)



14/09/2017 Researcher in Intelligent Transport Systems (I...) | EURAXESS

15/04/2016

Researcher in Intelligent Transport Systems (ITS)

Where to apply

Application Deadline: 15/10/2017 23:00 - Europe/Brussels

Contact Details

Where to send your application.

COMPANY
University of Zilina

E-MAIL
erachair@uniza.sk

Hiring/Funding Organisation/Institute

ORGANISATION/COMPANY
University of Zilina

COUNTRY
Slovakia

DEPARTMENT
University Science Park

CITY
Zilina

ORGANISATION TYPE
Public Research Institution

POSTAL CODE
01026

WEBSITE
http://www.erachair.uniza.sk/

STREET
Univerzitna 1

E-MAIL
erachair@uniza.sk

MOBILE PHONE
+421 905 253 880

The seven habits…

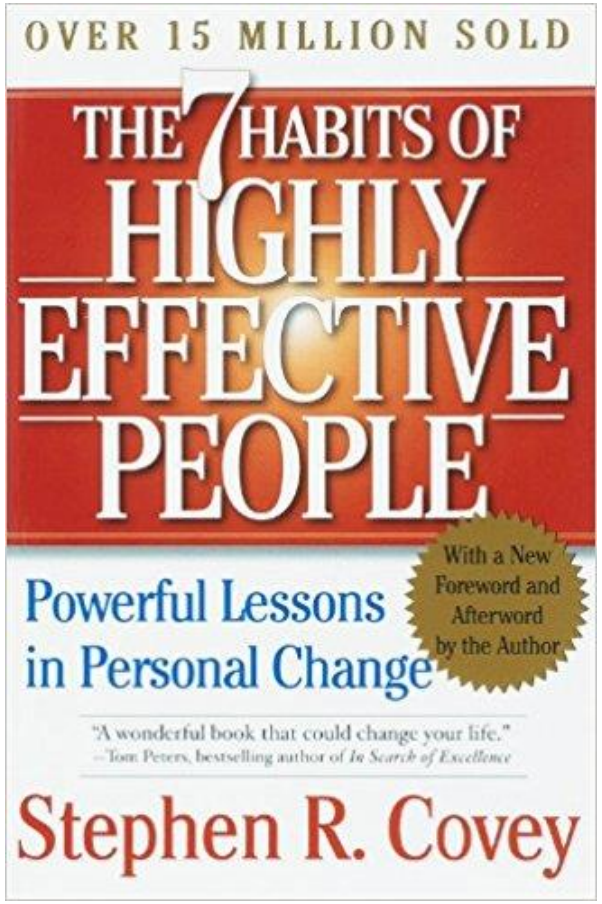
… of highly effective people

- **Habit 2**: Begin with the end in mind
- **Habit 3**: Put first things first

and then…

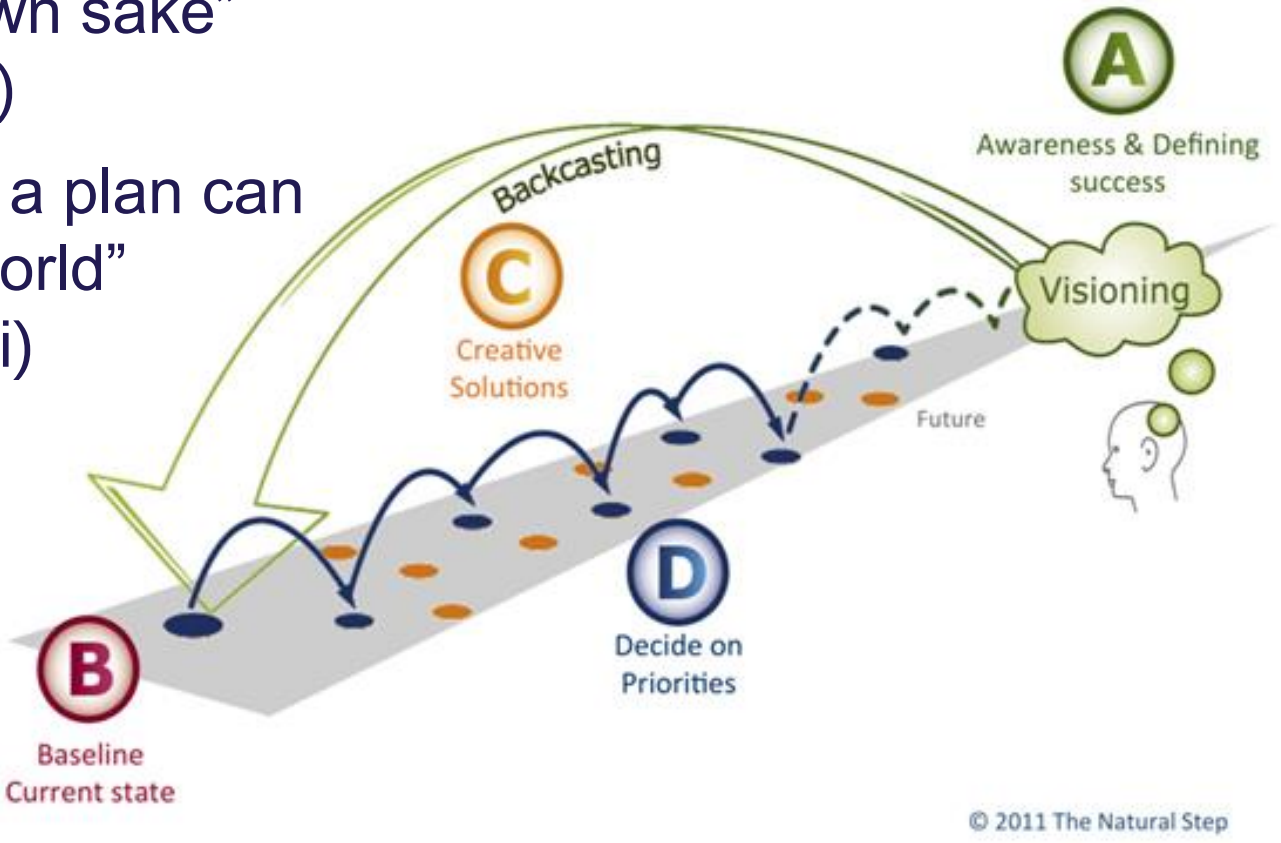
- **Habit 7**: Sharpen the saw

Disclaimer: not a book for happiness, but for effectiveness!



Visioning and backcasting

- “A vision is something we want for its own sake” (Peter Senge)
- “A vision with a plan can change the world” (David Suzuki)



My career plan (August 1998)

4 x 10 years

Quatre Carrieres
1) Software Engineering - Financial Information & Transactional Systems (25-30 yrs);
Learn: Team leading, Project & Company Management, Financial world, Canadian Working habits, Strategy, Technology (object oriented design, uml), Conception & Architecture, Analyse d'affaire, Conception Structuree, Gestion de Projet, Consultation de Gestion et du Changement
Age 28 at latest, live abroad as expatriate

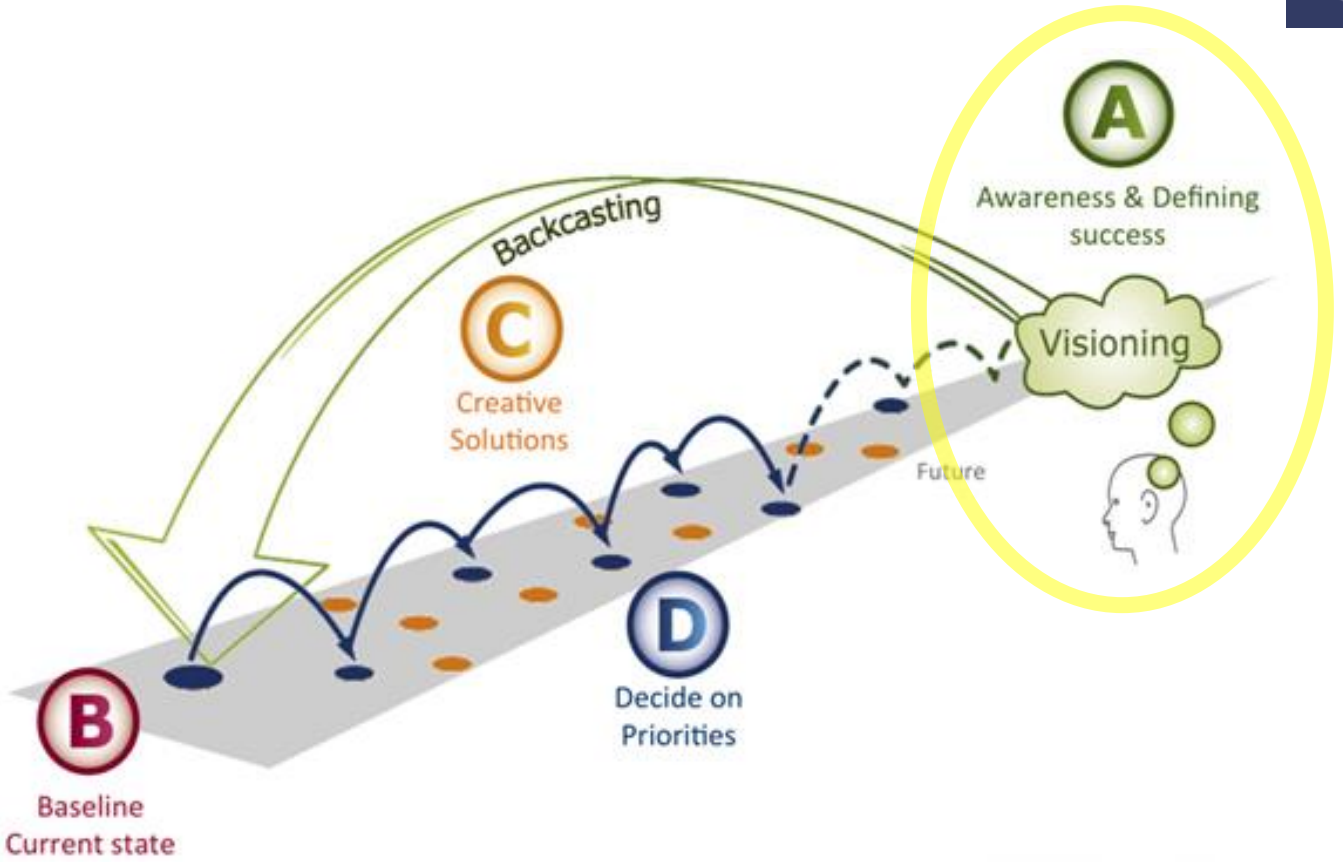
2) International Marketing, International Project Management (Technology (Telecom or Software) and/or Financial World) (30-40 yrs)
Learn: International MBA, International economics, Intl Balance of Powers, Languages
Age 30 at latest, MBA

3) International Politics - 'service exterieur', Ambassador or Foreign Trade Expert (ambassy), or Foreign Policy Expert or Conflict Solver (40-50 yrs)
(gens qui vont travailler et signer les accords comme World Trade Organisation)
Identify all international agencies, domaines de competences, their needs and requirements for entrance

4) University Teacher, Book Writer (50-60 yrs)
Share my learning, Put together all notes and wrtings I did until then,

5hrs / day * 200days / year * 10 years = 10000

What end goal do you have in mind?



When you will look back at your life,

what do you want to have achieved?

=

Career Purpose

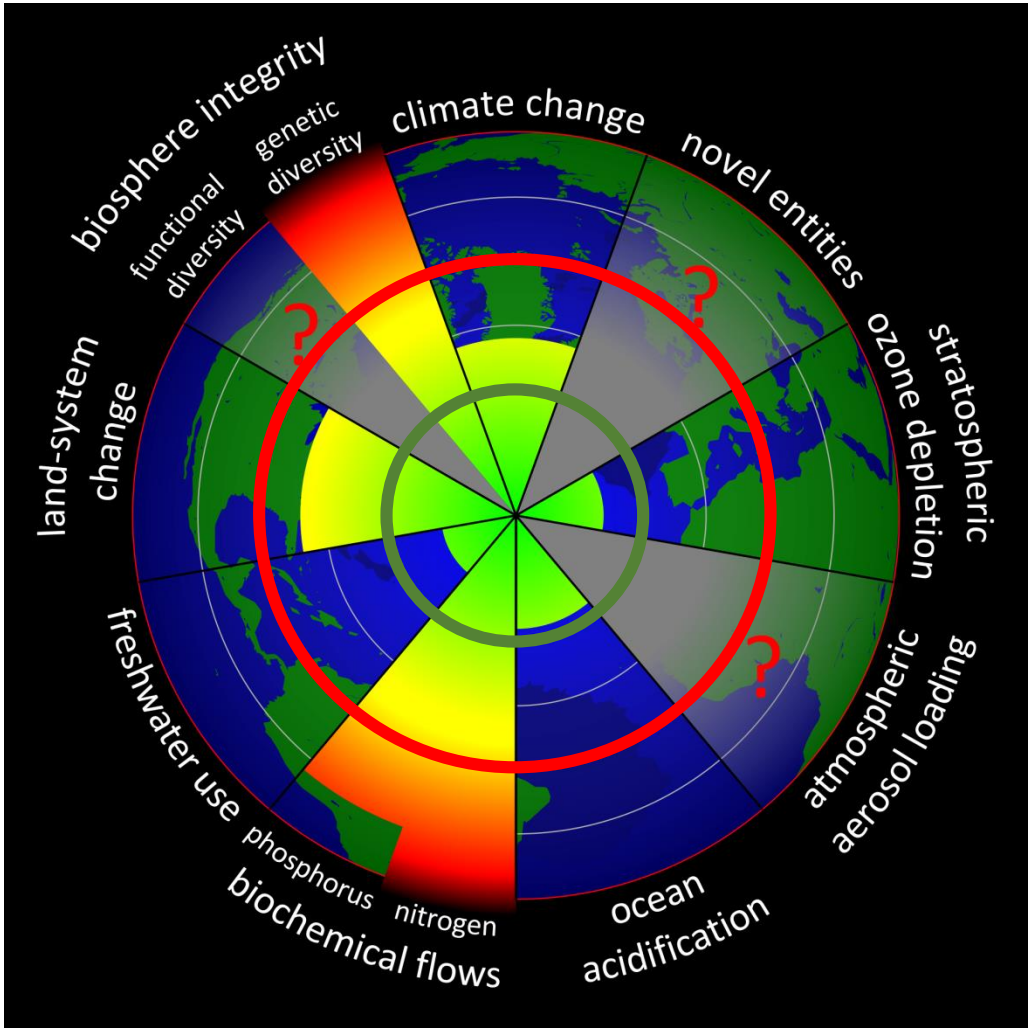
The path to finding purpose

What does the world need?

- A sustainability "revolution"
- 9 preconditions for a "safe operating space for humanity"

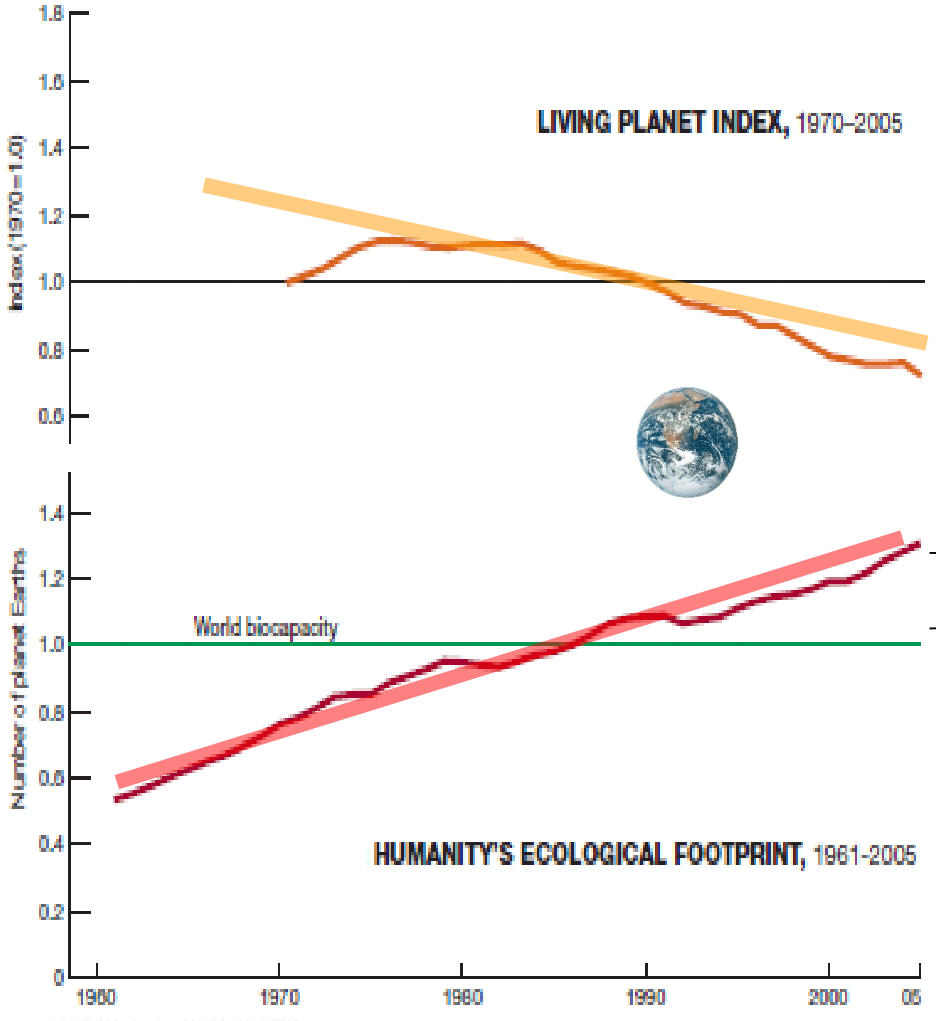
Safe boundary

Threshold, tipping point = risk of irreversible and/or abrupt environmental change



The Funnel metaphor

Source: WWF 2014



A measure of ecosystem health

- All of our global ecosystems are either under stress or in decline

A measure of human demands

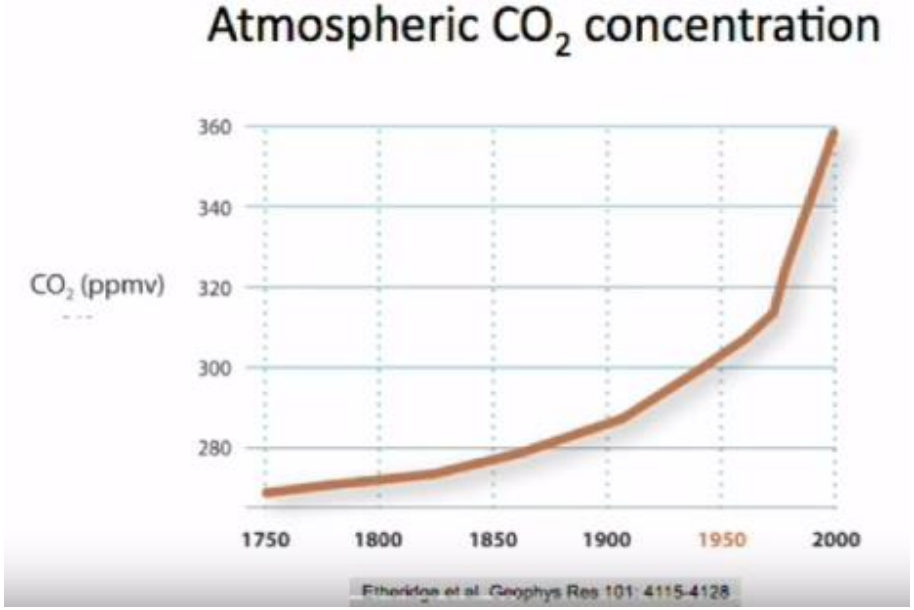
+ 30% overshoot = 1.3 planet (2005)

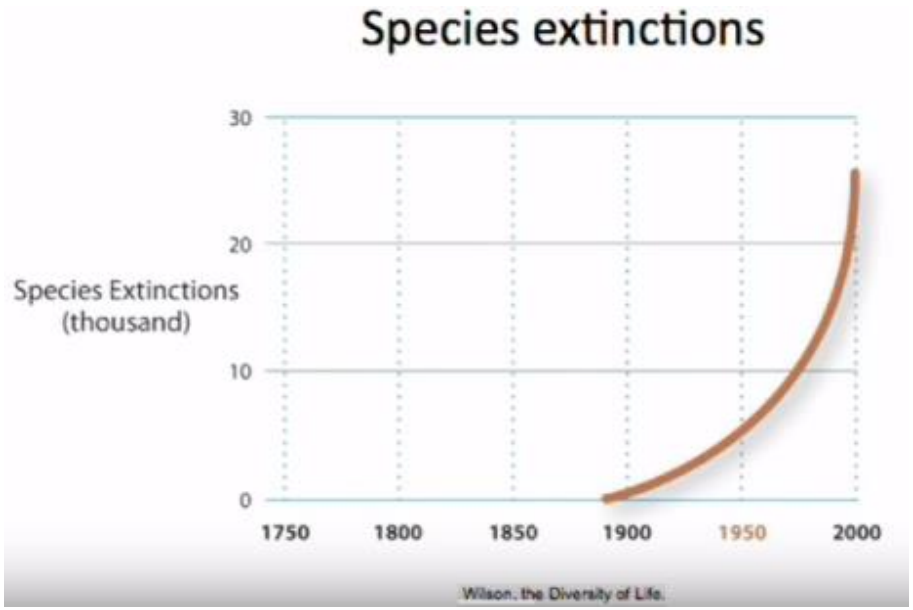
→ We are in a "funnel"

→ Margin for action is decreasing

Time delay problem:
difficult to take action if effect not immediately visible

Two key planetary boundaries





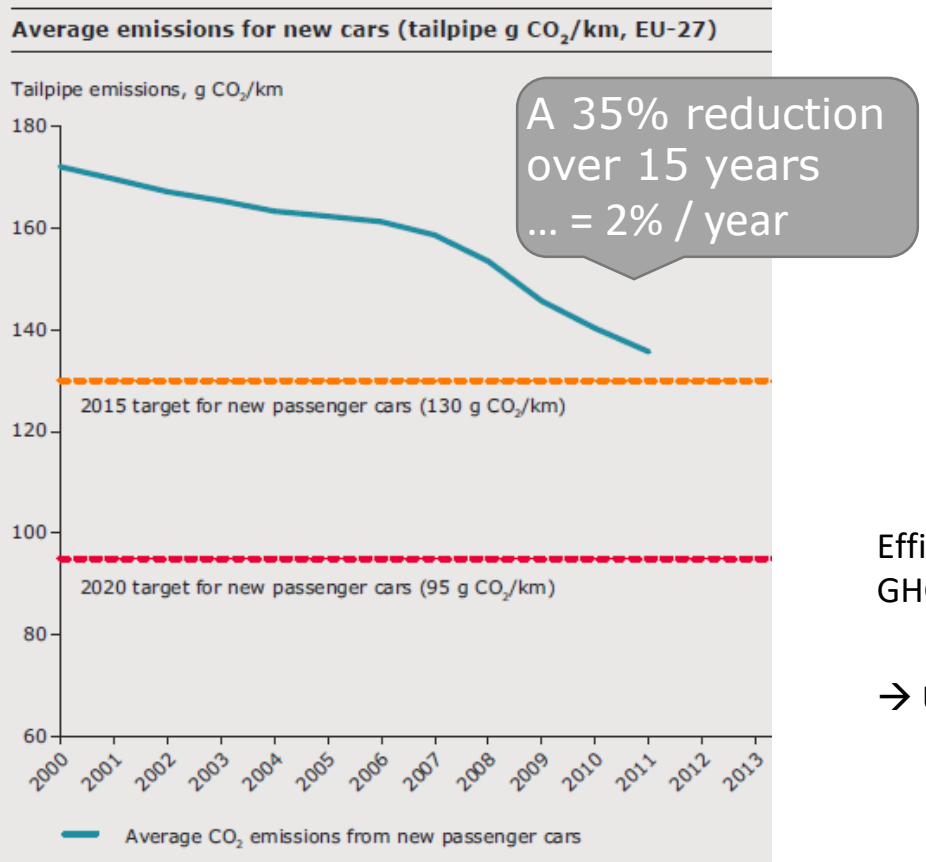
Steffen, Will et al. 2015. "Planetary Boundaries: Guiding Human Development on a Changing Planet." Science 347(6223).
https://www.sciencemag.org/content/347/6223/1259855.full

The Lilly Pond parable

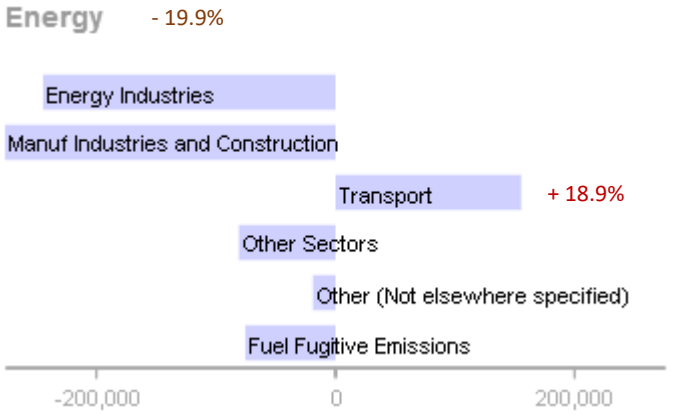
The number of lilies in a pond double every day. So, on the first day of the month there is one lily. On the second day, two lilies. If the pond is full on the 30th day of the month, on what day is it half full?

Transport trends

Source: EEA 2012, UNFCCC 2013
http://maps.unfccc.int/di/map/



A 35% reduction over 15 years
… = 2% / year



Energy-related emissions, aggregate GHGs, Gg CO2eq
Base year 1990 – 2011 change, EU-27

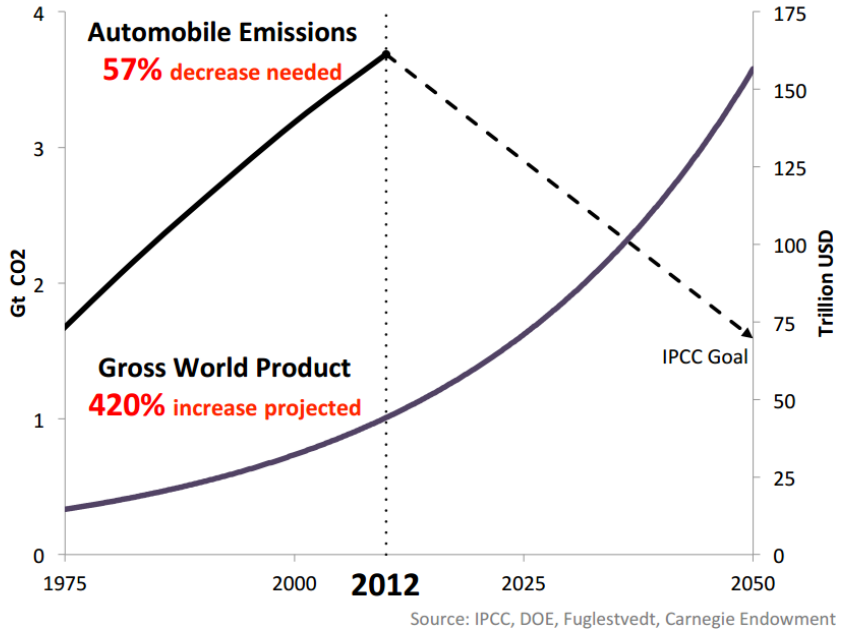
Efficiency improvements do not translate in net GHG reductions

→ Unsustainable trend

An efficiency problem?
Technology alone is not enough...

- There is a gap between what the industry is planning for and what sustainability science requires

$$Impact = Population \cdot \frac{Vehicles}{Population} \cdot \frac{Distance}{Vehicle} \cdot \frac{Impact}{Distance}$$



Source: IPCC, DOE, Fuglestvedt, Carnegie Endowment

Current efforts are inadequate

- **770%** increase in automobile energy efficiency is needed

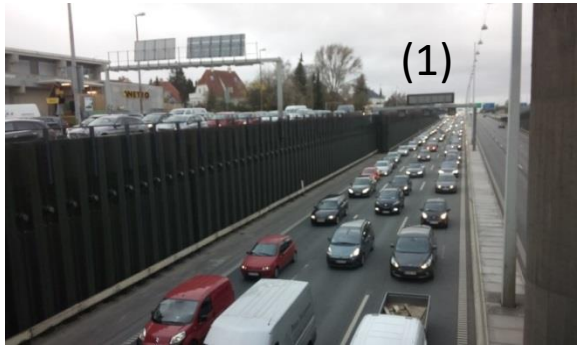
Source: MIT study http://web.mit.edu/2.813/www/index_files/Bolin_2012_Autos_Part_1_slides.pdf

*Un*sustainable transport?

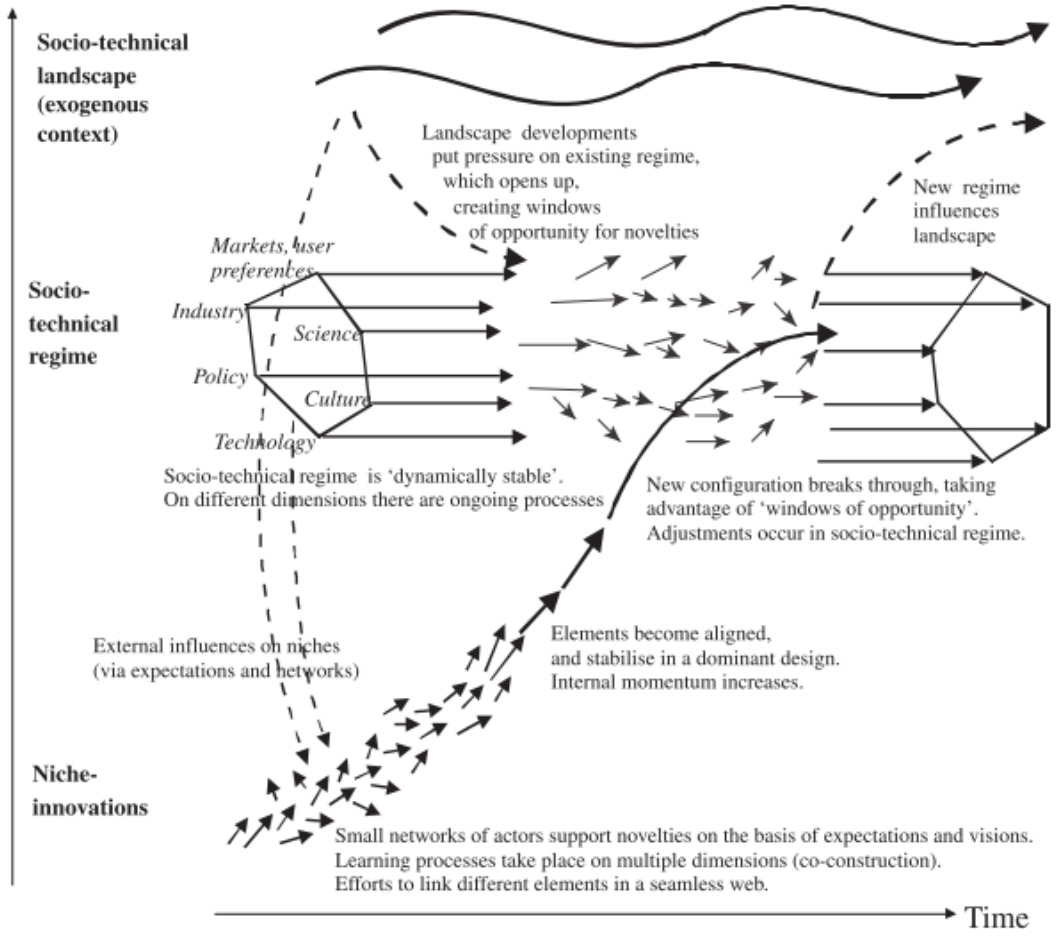
1. Congestion
2. Safety
3. Emissions

But also

4. Sprawl
5. Habitat Fragmentation
6. Health (air, noise)
7. Social justice



Transition – a theory about change



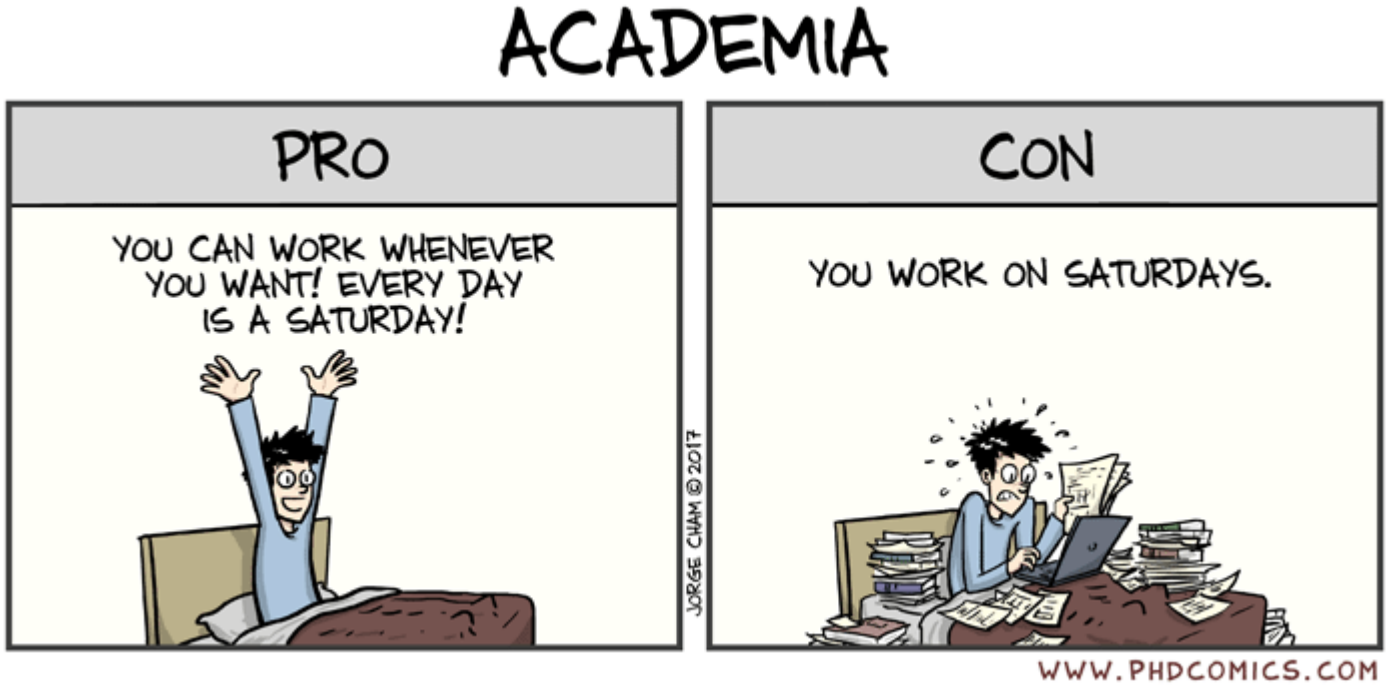
Complex systems:

- Technology & knowledge
- Markets and industry
- Culture, habits
- Policy and regulations
- Discourses

Key role for technological innovations

- Experimentation as key enabler

Example of complex change
Sustainable Transport



PhD++ Career Tips

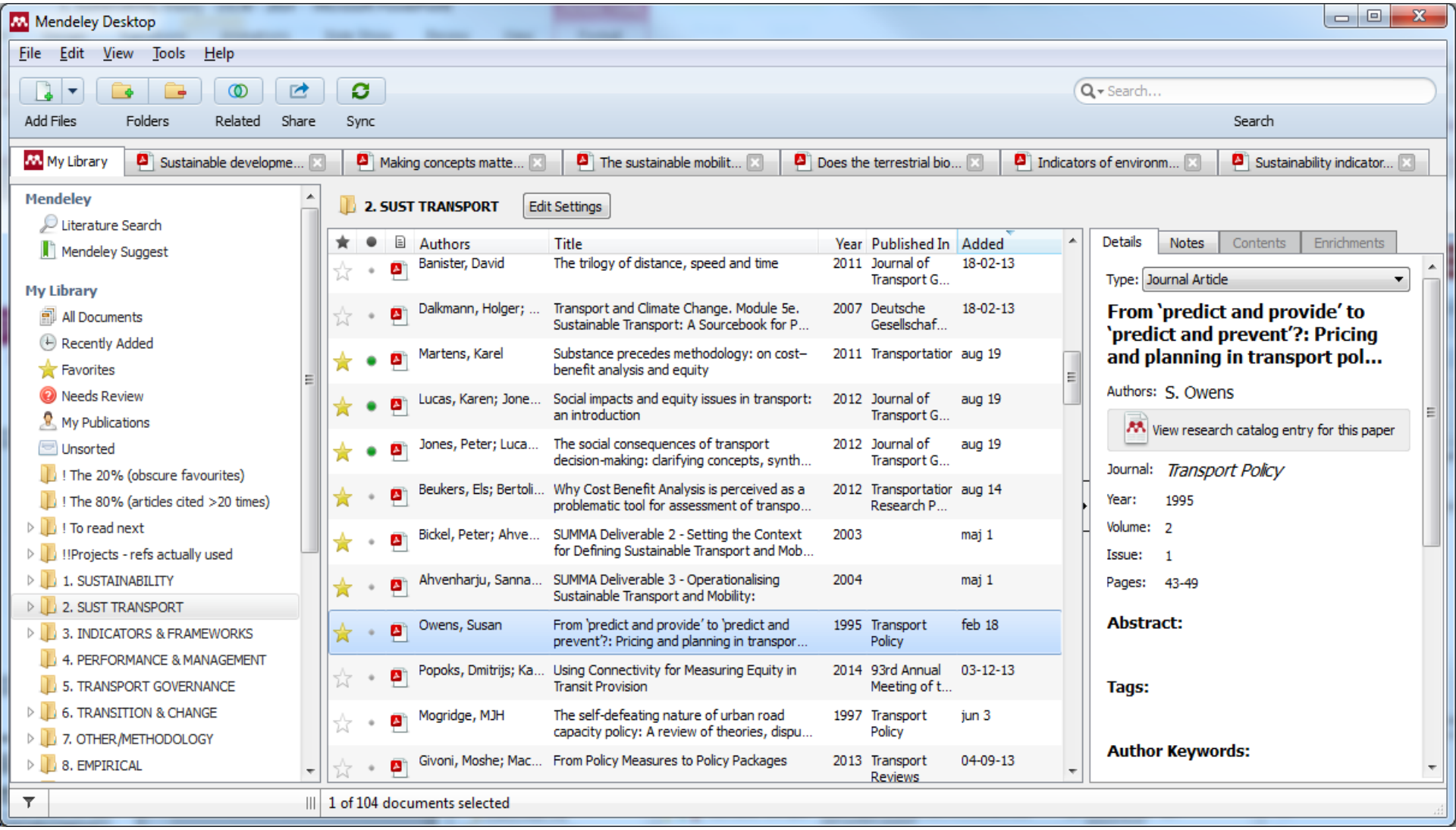
My PhD

- **Year 1**: What on earth I am going to do? Let me read more. Mm that looks interesting..
- **Year 2**: Panic, I must write a paper, something..
- **Year 3**: I found my mountain. Should I climb it or dig a tunnel? Either way, it's going to be painful..
- **3 months into year 3**: I found two more mountains. Great I will climb them too. *And* dig a tunnel. *And* calculate the sustainability impact of all that.
  - *Ps: for paper-based thesis, 'wrapping' up into a coherent whole takes time but it is worth it*
- **6 months into year 3**: host defense *and* seminar

Basic gear

- Dropbox *(or similar)*
  - Computers crash. Murphy is always right.
- Mendeley
  - Your knowledge is your biggest asset. Keep track of the giants.
- Track your time
  - Officetime.net worked for me.
  - Writing a paper, from start to finish? 300 to 800 hours
- Get a place and proper equipment to work
  - Good chair, large desk, ergonomic mouse, .. whatever it takes

Mendeley


Mendeley Desktop
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Share
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Search...
Search
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Sustainable developme...
Making concepts matte...
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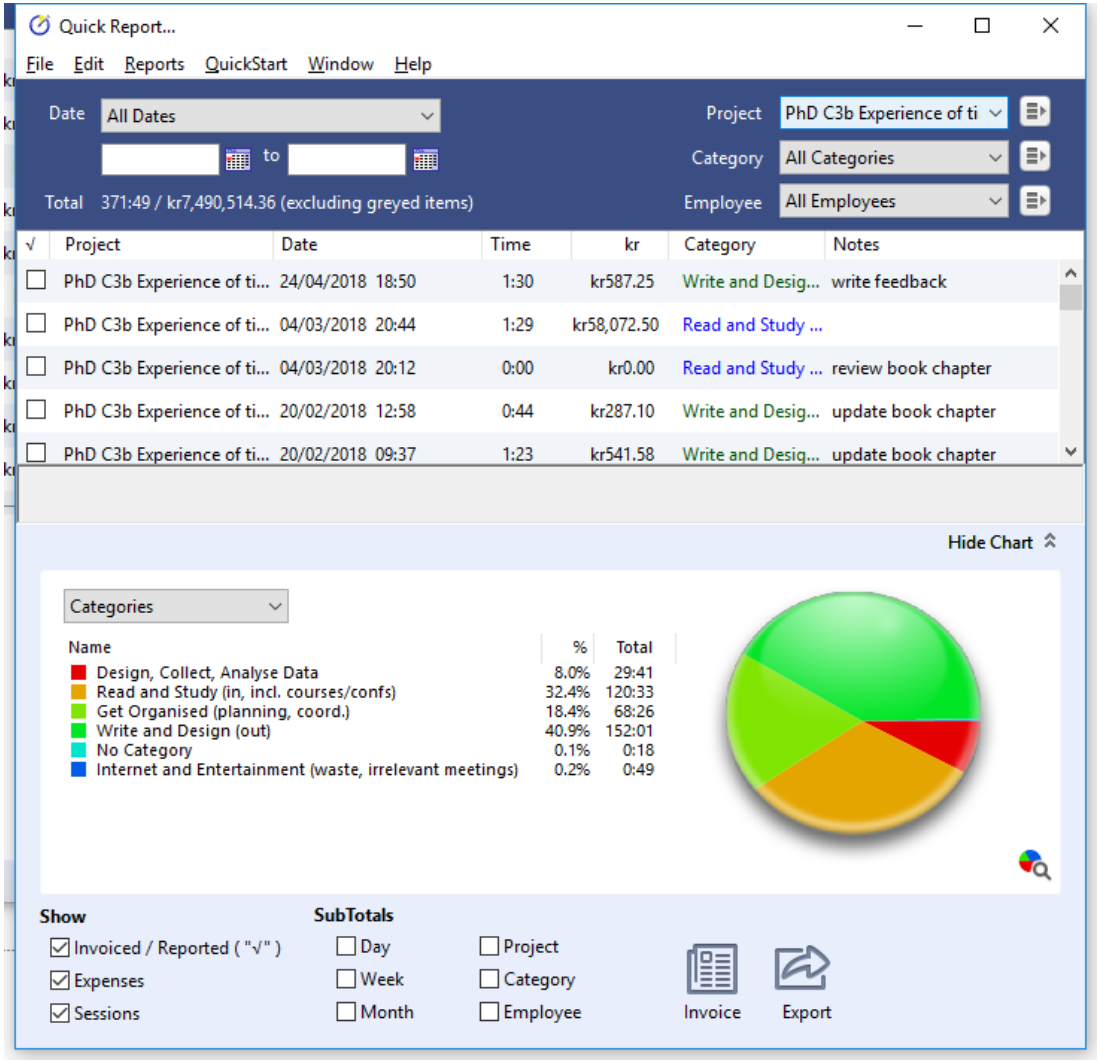
Indicators of environm...
Sustainability indicator...
Mendeley
Literature Search
Mendeley Suggest
My Library
All Documents
Recently Added
Favorites
Needs Review
My Publications
Unsorted
! The 20% (obscure favourites)
! The 80% (articles cited >20 times)
! To read next
!!Projects - refs actually used
1. SUSTAINABILITY
2. SUST TRANSPORT
3. INDICATORS & FRAMEWORKS
4. PERFORMANCE & MANAGEMENT
5. TRANSPORT GOVERNANCE
6. TRANSITION & CHANGE
7. OTHER/METHODOLOGY
8. EMPIRICAL
2. SUST TRANSPORT
Edit Settings
Authors
Title
Year
Published In
Added
Banister, David
The trilogy of distance, speed and time
2011
Journal of Transport G...
18-02-13
Dalkmann, Holger; ...
Transport and Climate Change. Module 5e. Sustainable Transport: A Sourcebook for P...
2007
Deutsche Gesellschaf...
18-02-13
Martens, Karel
Substance precedes methodology: on cost–benefit analysis and equity
2011
Transportatior
aug 19
Lucas, Karen; Jone...
Social impacts and equity issues in transport: an introduction
2012
Journal of Transport G...
aug 19
Jones, Peter; Luca...
The social consequences of transport decision-making: clarifying concepts, synth...
2012
Journal of Transport G...
aug 19
Beukers, Els; Bertoli...
Why Cost Benefit Analysis is perceived as a problematic tool for assessment of transpo...
2012
Transportatior Research P...
aug 14
Bickel, Peter; Ahve...
SUMMA Deliverable 2 - Setting the Context for Defining Sustainable Transport and Mob...
2003
maj 1
Ahvenharju, Sanna...
SUMMA Deliverable 3 - Operationalising Sustainable Transport and Mobility:
2004
maj 1
Owens, Susan
From 'predict and provide' to 'predict and prevent'?: Pricing and planning in transpor...
1995
Transport Policy
feb 18
Popoks, Dmitrijs; Ka...
Using Connectivity for Measuring Equity in Transit Provision
2014
93rd Annual Meeting of t...
03-12-13
Mogridge, MJH
The self-defeating nature of urban road capacity policy: A review of theories, dispu...
1997
Transport Policy
jun 3
Givoni, Moshe; Mac...
From Policy Measures to Policy Packages
2013
Transport Reviews
04-09-13
Details
Notes
Contents
Enrichments
Type: Journal Article
From 'predict and provide' to 'predict and prevent'?: Pricing and planning in transport pol...
Authors: S. Owens
View research catalog entry for this paper
Journal: Transport Policy
Year: 1995
Volume: 2
Issue: 1
Pages: 43-49
Abstract:
Tags:
Author Keywords:
1 of 104 documents selected

Officetime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Category All Categories
Employee All Employees
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PhD C3b Experience of ti... 20/02/2018 09:37 1:23 kr541.58 Write and Desig... update book chapter
Hide Chart
Categories
Name % Total
Design, Collect, Analyse Data 8.0% 29:41
Read and Study (in, incl. courses/confs) 32.4% 120:33
Get Organised (planning, coord.) 18.4% 68:26
Write and Design (out) 40.9% 152:01
No Category 0.1% 0:18
Internet and Entertainment (waste, irrelevant meetings) 0.2% 0:49
Show
Invoiced / Reported ("√")
Expenses
Sessions
SubTotals
Day
Week
Month
Project
Category
Employee
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Export

Tips that worked for me

- Read literature reviews
  - Find the journal doing reviews in your field e.g. Transport Reviews
  - Write one (…easier said than done…)
- Keep a list of journals
  - Get to know them and who is behind them
  - Where do authors you like publish?
- Collaboration is key
  - Look out for complementary strengths
  - More senior researchers expect your initiative
- Teaching – sharing is caring
  - It helps to clear thoughts and spot bright students
- External stay is extremely valuable
  - Pick the right place, in case of doubt, go to Oxford

Journals

	Editor	Typical authors	Open	Special ed.	SJR 2015	SJR 2013	ISI	Country	Aug-
Research Policy		Smith, Geels, Ulrik				**2.63**	YES	NL	11
Transportation Research, Part A: Policy and Practice	J. de D. Ortúzar, J.M. Rose	Mokhtarian, Amekudzi, Marsden, Givoni..		http://www.jc	**1.81**	**2.43**	NO	UK	28
Ecological Economics		Gudmundsson 1996				**1.91**	YES	NL	16
Environmental Innovation and Societal transitions		Geels, Raven ,Næss				**1.73**	NO	NL	4
Journal of Transport Geography	**Tim Schwanen!**	Basnister, Geels, van Wee, Marsden..			**1.73**	**1.72**	YES	NL	20
Journal of Cleaner Production		Robèrt, Smith				**1.7**	YES	UK	9
Transport Reviews	**David Banister**			http://www.ta	**1.63**	**1.68**	YES	UK	17
Transport Policy		Banister, van Wee, Marsden..			**1.35**	**1.67**	YES	UK	26
International Journal of Sustainable Transportation	**David Banister (co-editor)**	Joumard, Langhelle		http://www.ta	**2.22**	**1.56**	YES	UK	5
Journal of Planning Education and Research				http://jpe.sag	**1.047**	**1.44**	YES	US	3
Ecological Indicators				http://www.sciencedirect		**1.35**	YES	NL	14
Current Opinion in Environmental Sustainability		Kosoy, Figueroa				**1.33**	YES	NL	5
Technological Forecasting and Social Change	Raven	Markards			**1.35**	**1.26**	YES	US	6
Transportation Research Part D: Transport and Environmen	H.O. Gao			http://www.journals.elsev		**1.26**	NO	UK	7
Environmental Impact Assessment Review		Gasparatos, Cashmore				**1.22**	YES	US	7
Decision Support Systems					**1.806**				
Sustainable Development		Hopwood, Giddings				**1.05**	YES	UK	7
Journal of Advanced Transportation		Macharis	**YES!**		**0.752**	**0.936**	YES	US-UK	1
European Journal of Transport and Infrastructure Research	**no longer - David Banister**	Marsden		http://www.ejtir.tbm.tud		**0.91**	YES	NL	1
Futures		Dreborg, Redclift				**0.69**	YES	UK	10
Journal of Environmental Policy & Planning				http://www.tandfonline.c		**0.65**	YES	UK	4
Transportation Research Record						**0.62**	YES	US	19
Local Environment				http://www.tandfonline.c		**0.58**	NO	UK	8
International Journal of Sustainable Development & World	Cervero	Holmberg				**0.53**	YES	UK	4
European Transport Research Review	Anthony May		**YES**	http://www.editorialman		**0.48**	YES! Ch	DE	1
Transportation Letters						**0.43**	YES	UK	0
Transport	Olegas Prentkovskis	Henrik	**Hybrid**	http://explore.tandfonlin		**0.39**	YES	LIT	0

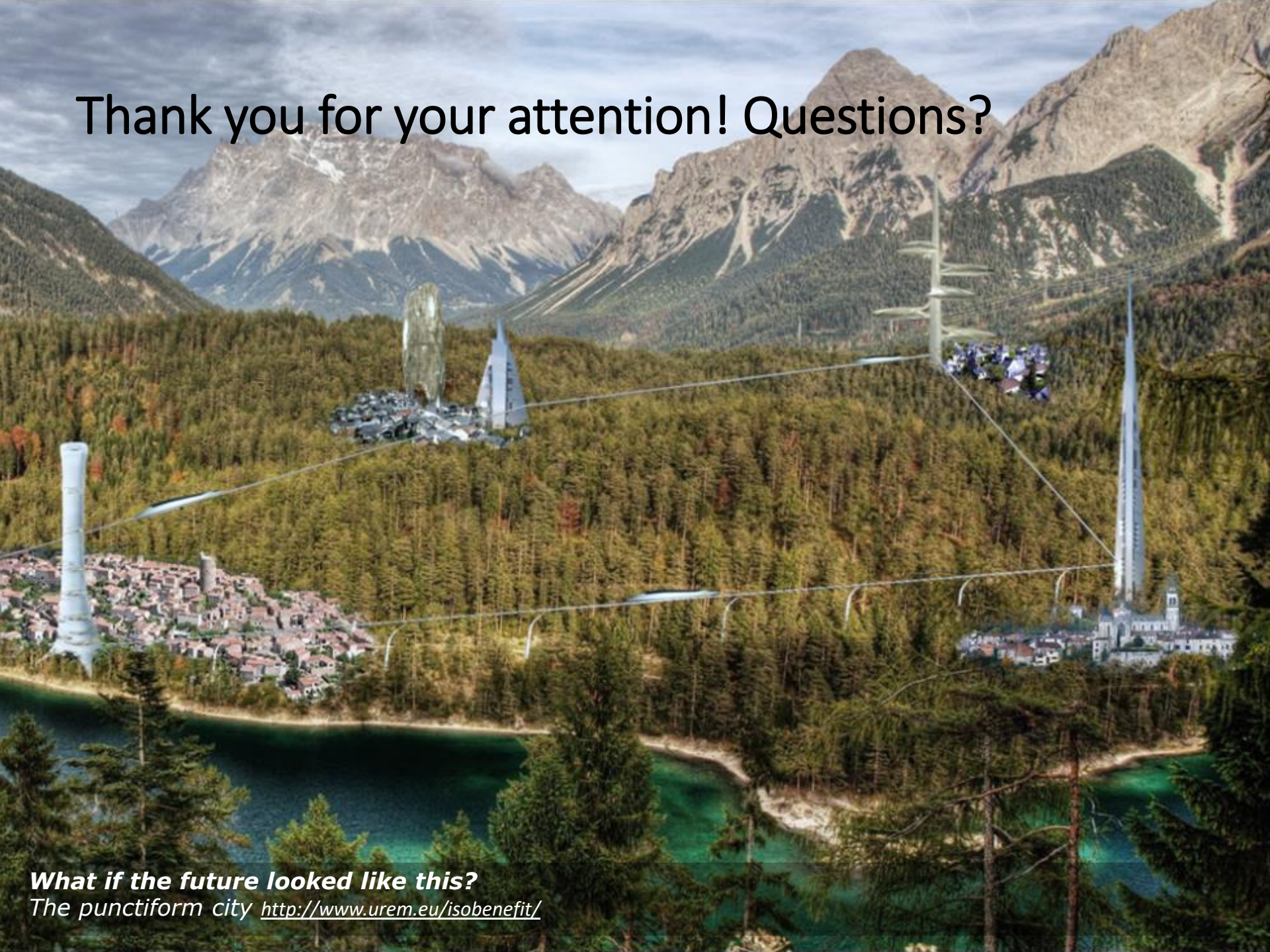
What I learned

- Precision
  - Being clear about what I mean, what I do, where I contribute
  - Careful when citing!
- Methodology and assumptions matter
  - Results are only as good as them
- Complexity
  - There is not one truth to be discovered
  - Interdisciplinary, multi-methodological approach is key
- PhD is the entry ticket
  - it’s not the end, it’s the beginning

Key take-away message

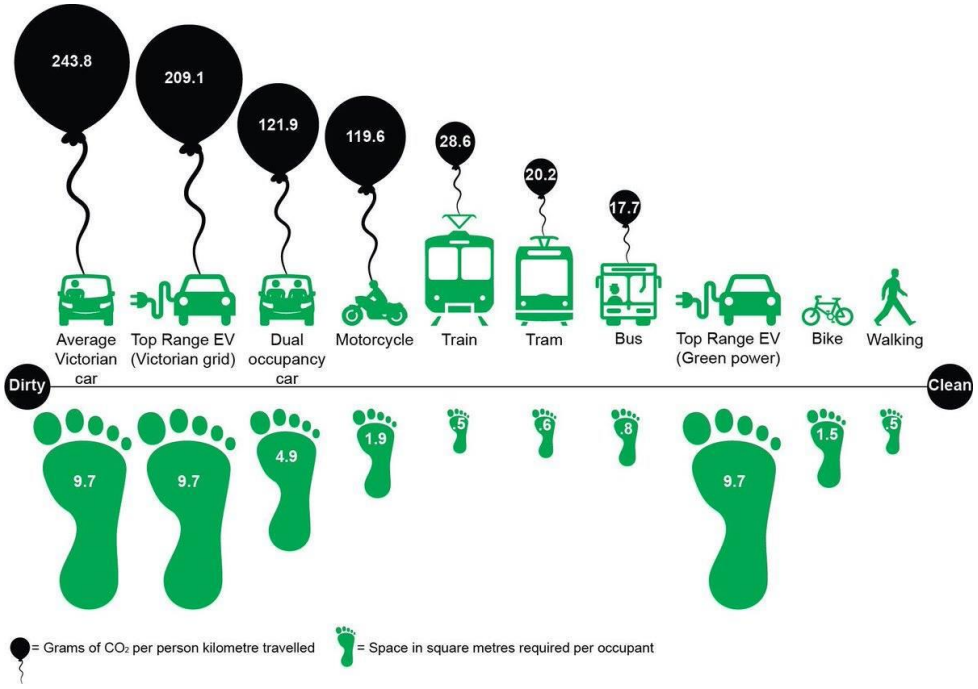
- Do what you are good at, it's is usually what you love
- Do what you love, because you can become good at it
- Plan your life before others plan it for you!
- If you are good at something, money usually follows
- And then add '**Sustainable** …' in front because that is what the world dearly needs now
  (is this fact or opinion?)
- *My contact: Yannick.cornet@uniza.sk*

Thank you for your attention! Questions?



What if the future looked like this?
The punctiform city http://www.urem.eu/isobenefit/

Thank you


243.8
209.1
121.9
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20.2
17.7
Average Victorian car
Top Range EV (Victorian grid)
Dual occupancy car
Motorcycle
Train
Tram
Bus
Top Range EV (Green power)
Bike
Walking
Dirty
Clean
9.7
9.7
4.9
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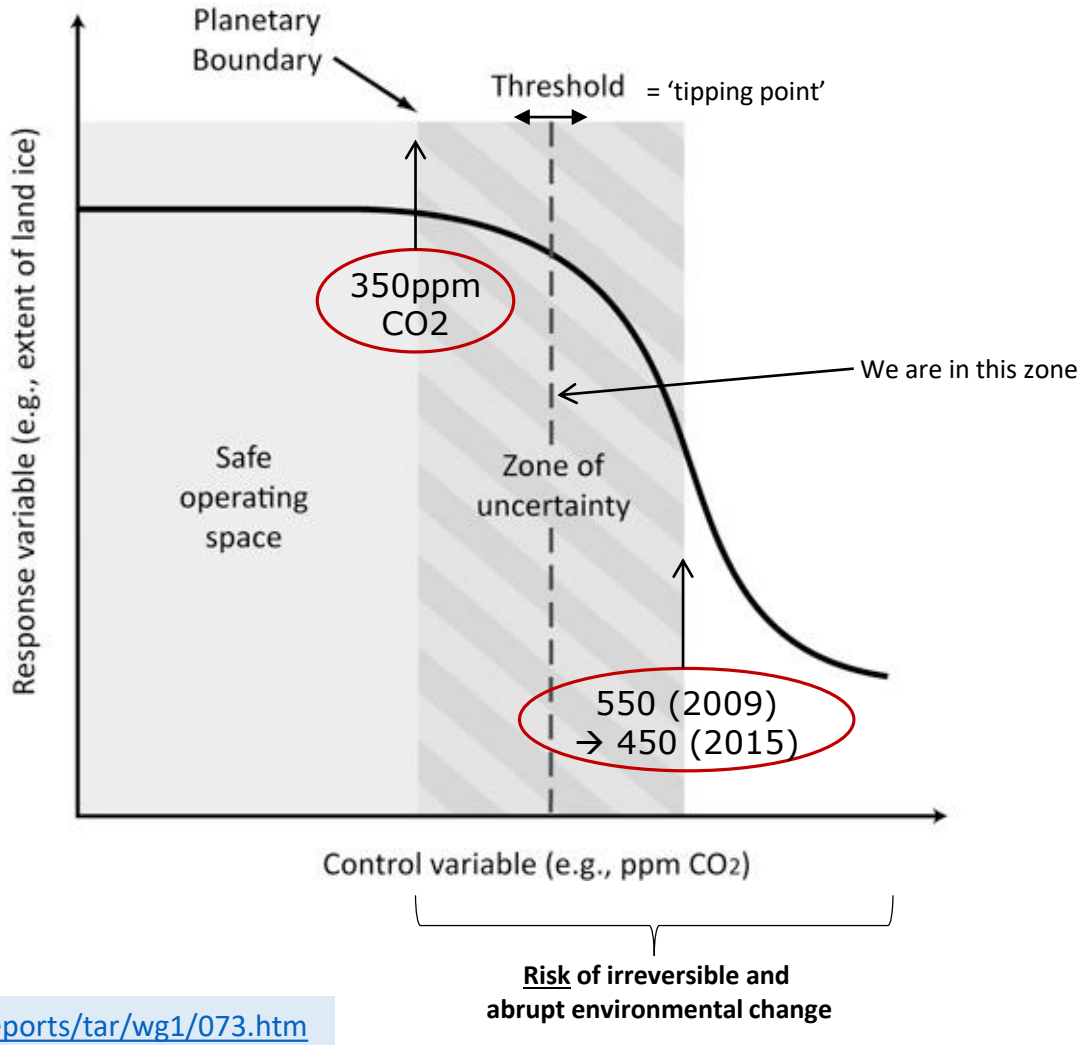
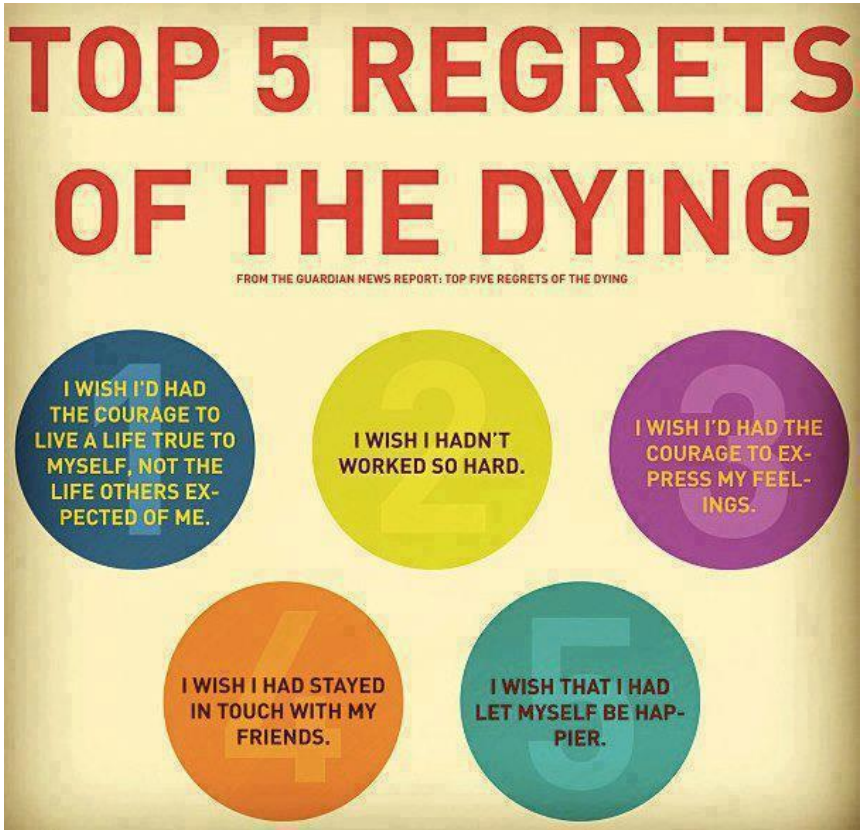
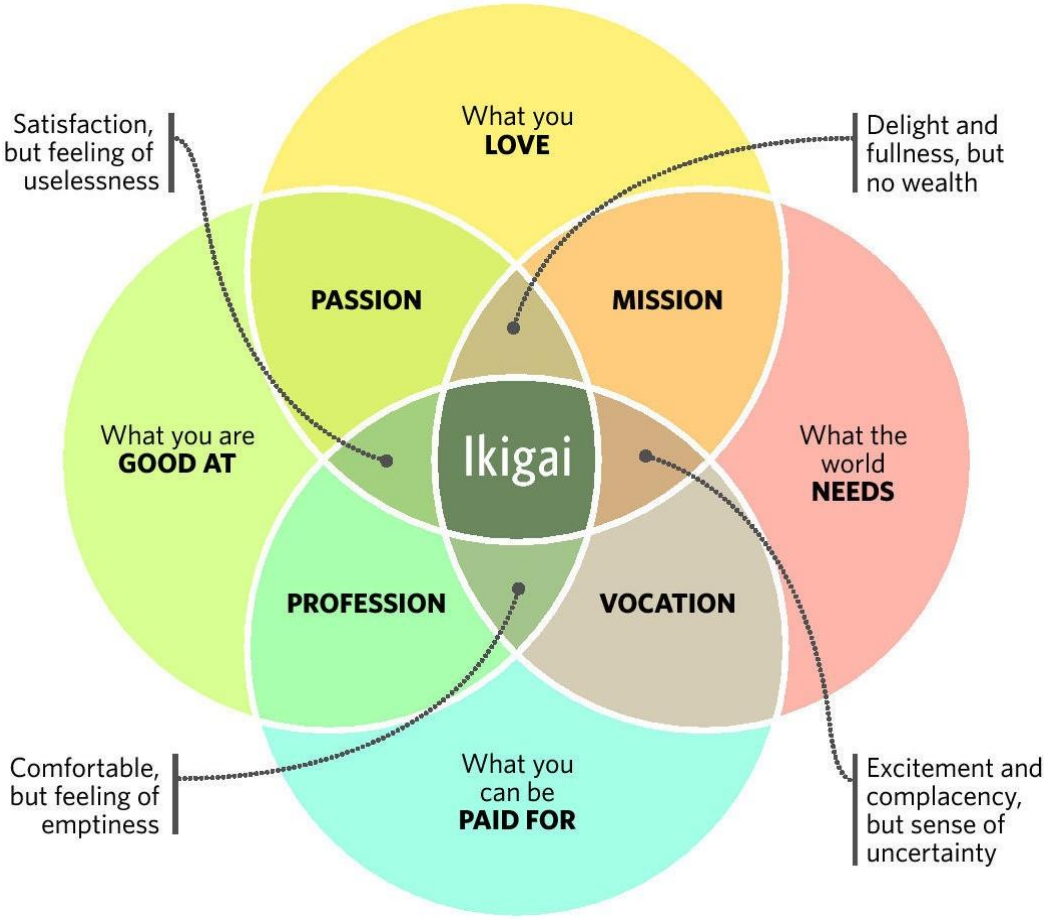
= Grams of CO_2 per person kilometre travelled
= Space in square metres required per occupant

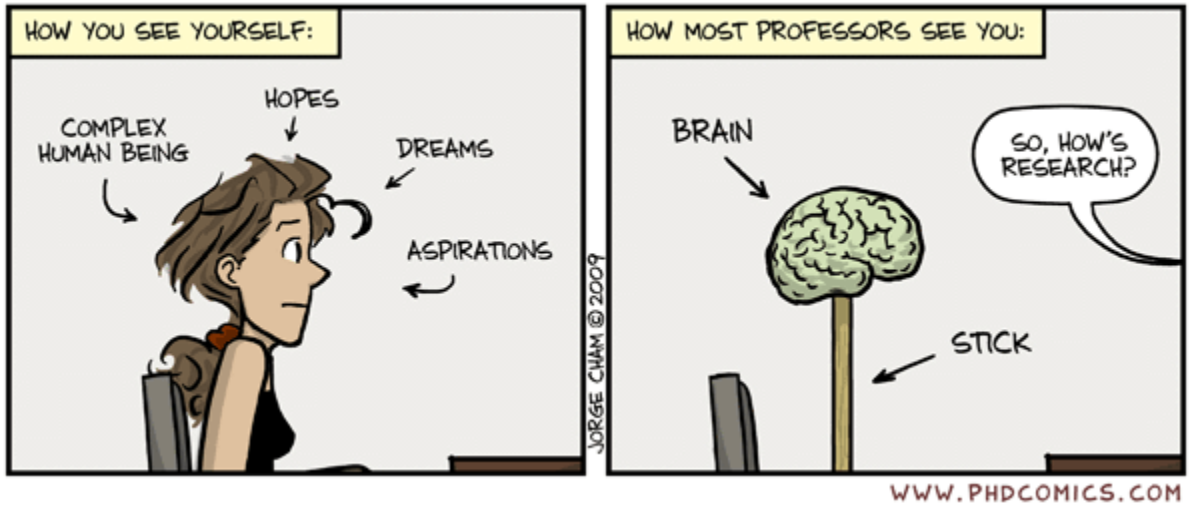
A bit more on climate change boundary



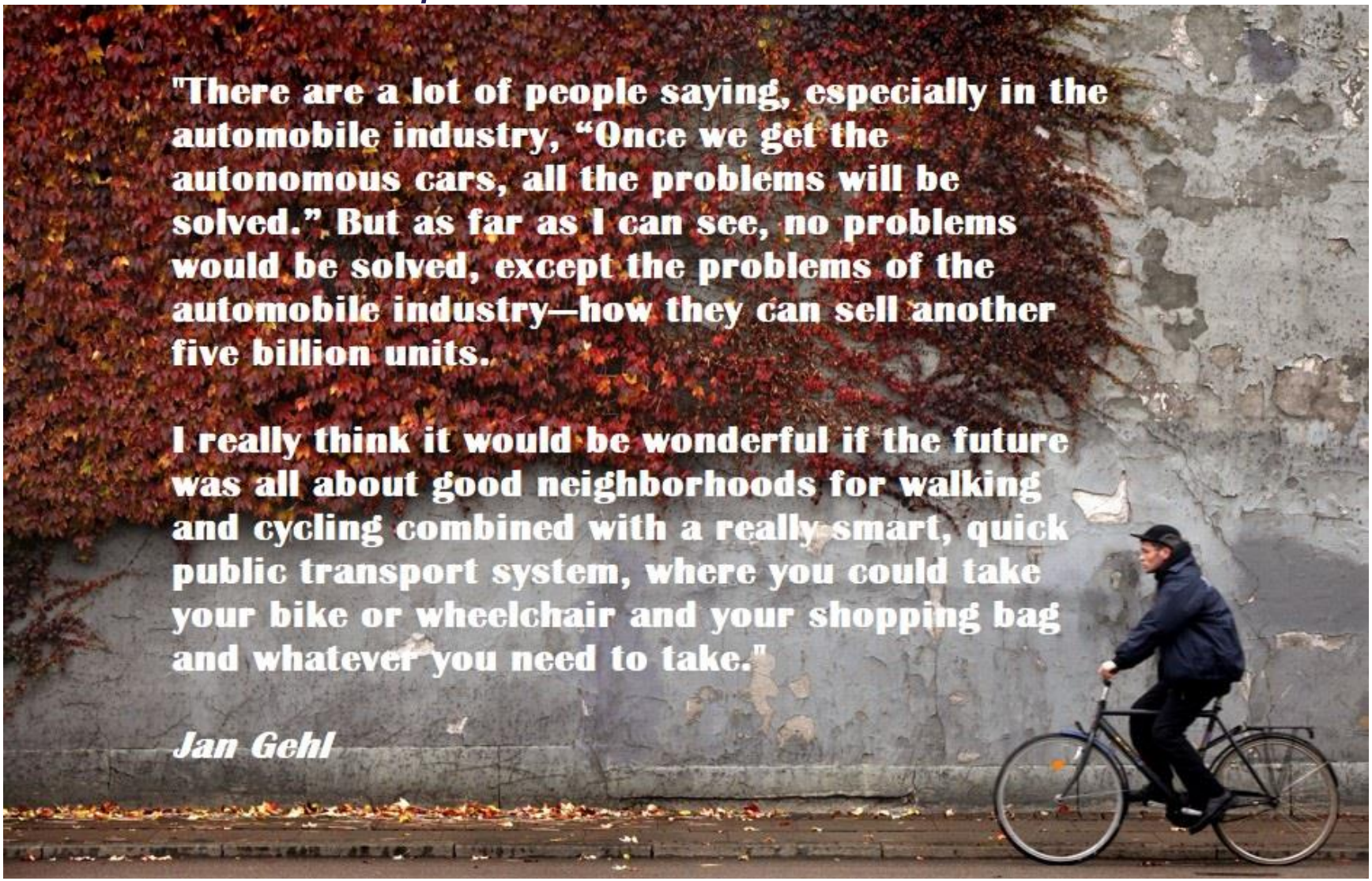
UN IPCC: http://www.ipcc.ch/ipccreports/tar/wg1/073.htm


TOP 5 REGRETS OF THE DYING
FROM THE GUARDIAN NEWS REPORT: TOP FIVE REGRETS OF THE DYING
1
I WISH I'D HAD THE COURAGE TO LIVE A LIFE TRUE TO MYSELF, NOT THE LIFE OTHERS EXPECTED OF ME.
2
I WISH I HADN'T WORKED SO HARD.
3
I WISH I'D HAD THE COURAGE TO EXPRESS MY FEELINGS.
4
I WISH I HAD STAYED IN TOUCH WITH MY FRIENDS.
5
I WISH THAT I HAD LET MYSELF BE HAPPIER.


What you
LOVE
Satisfaction,
but feeling of
uselessness
Delight and
fullness, but
no wealth
PASSION
MISSION
What you are
GOOD AT
Ikigai
What the
world
NEEDS
PROFESSION
VOCATION
Comfortable,
but feeling of
emptiness
What you
can be
PAID FOR
Excitement and
complacency,
but sense of
uncertainty



Career Planning

Vision for my research topic

Sustainable Transport