2015 NUTC Business Advisory Council
faculty introduction

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Need to deliver efficient and sustainable transport solutions

- Put human behavior at the center of transport policy
Sustainability policies require models

Making sustainable mobility a reality

Need to understand human behavior

Standard model structures often fail to understand/predict

Need new models + data

Challenges
- * urgencies: urbanisation, emissions
- * accelerated innovation
- * new motivations/sensit.

Opportunities
- * big data/social media
- * games/virtual settings
- * innovative experiments

New elements
- * sociality
- * non-rational process
- * time-dynamics

Pro sustainable development?

Motivation
Past
NU work
BAC connections

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Example of past industrial collaborations

Past Industry collaboration

- Constellium new material launch: how price? What market?
- PSA group: Car market of the future? Plan launches.
- Nissan: electric vehicle dynamics?

What?

- Design experiment for OEM’s, analyze data
- Model large data-base, forecast scenarios
- Design experiment + analyze in-car data

Innovative feature

- Company decision process, behavior-based pricing, predict willingness-to-pay
- Transaction model with policies, trends, supply
- Model process of adoption, experience and changed driving patterns
New ideas at NU

Current work
Crowdsourced Urban Delivery
Behavior + Optimisation
New, big, innovative data

What?
Interview, model ‘crowd-shippers’
Experiment, integrate
Collect, analyze

Innovation
Sharing and crowd-resources
Fusing frameworks
Define multi-method strategies
Synergies

Industry partner

- Real operational challenges
- Data and analytical expertise
- Deep problem knowledge

Academic partner

- New take, approach, theory
- Propose new analysis, access to unique data
- Acquire industry insights

Behavior analysis

- Design surveys/data collection tools
- Analyze/model/forecast
- Decision aid
Thank you for your attention: Questions?

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Research Grants

- **Swiss National Science Foundation** Large Scale Location Data for the Advancement of Route Choice Models, with Ph.D Evanthia Kazagli (2013-2016)

- **PSA Peugeot Citroën** "A dynamic vehicle choice forecasting framework, with Ph.D Aurelie Glerum (2012-2013)

- **Constellium / Innovation Cells** Development of a choice experiment adapted to evaluate market viability and pricing strategy of a novel aerospace product applied in a real decision context, analysis of the B2B perspective (2012)

- **Nissan** electric vehicle adoption dynamics: exploring market potentials, with Ph.D A. Fernández Antolín), (2014-2017)