

# CAROLINE NOWACKI

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## Education

**Stanford University**, Palo Alto, CA, USA  
Ph.D. Candidate in Civil & Environmental Engineering, Sustainable Design and Construction Program, with the Interdisciplinary Research lab: Global Projects Center  
Expected graduation: Spring 2018

**Stanford University**, Palo Alto, CA, USA  
M.S. in Civil & Environmental Engineering, Sustainable Design and Construction – 2015

**ESSEC Business School**, Paris, France  
M.S. and Bachelor in Management, Major in Urban Economics – 2012

**Lycée Henri IV**, Paris, France  
Selective Preparatory Program to the entrance exams of the “grandes écoles” – 2007

## Dissertation

### **Sovereign Investors as Agents of Institutional Change**

**Committee:** Prof. Raymond E. Levitt, Dr. Ashby H.B. Monk, Prof. William P. Barnett

Sovereign Investors (SIs), including Sovereign Wealth Funds and Pension Funds, account for close to US100 trillion. They invest an increasing share of their capital directly, in sectors supporting regional and national development. They are a perfect setting to explore the mechanism and network of actors supporting institutional emergence at different levels: the field of sovereign investors, and the industry they try to spur.

My research question is how do Sovereign Investors change local and international institutions (rules, values and cognitive frameworks) to successfully attract foreign direct investments, and meet their financial and developmental objectives? I answer this question by analyzing the emergence of SIs as a new category of investors at the global scale, and by studying the governance and identity of two state-owned investment funds in a developed and developing country.

At the global scale, I use natural language processing tools to analyze SIs’ annual reports and build a taxonomy of SIs based on internal themes instead of external characteristics. I explore the correlation between their language and the location of their investment and their co-investment partners.

At the local scale, I lay out the governance characteristics established by New South Wales’ infrastructure agency as a new standard to effectively lease existing assets and propose an integrated infrastructure plan and influence state bureaucracy. These

characteristics were copied by other states and are found in other countries, supporting the emergence of a new model of bureaucracy, “the financier state”.

In a developing country, I studied a sovereign fund playing the role of institutional entrepreneur. I show how this actor entertained institutional complexity to influence an emerging logic. Studying the network of co-investments, I show that the institutional entrepreneur was not a broker, nor a star. It was central to the whole network and controlled companies that were stars to their own field, and brokers between fields.

## Research Experience

- 2015      **Research Analyst for the Global Infrastructure Team**  
Queensland Investment Corporation (QIC), Brisbane, Australia
- Opportunities for infrastructure investment from the Chinese “One Belt One Road” Plan ([link to publication](#))  
Impacts and Opportunities from Five Megatrends for infrastructure investors ([link to publication](#))  
Trends in Australian Urbanization and opportunities for infrastructure investors (internal)
- 2014      **Research Assistant**  
Global Projects Center, Stanford CA
- Role of Pension Funds in Infrastructure Investments, case study of the N33 road in the Netherlands ([link to publication](#))  
Principal Investigator: Michael Bennon
- 2014      **Research Assistant**  
Center for Integrated Facility Engineering, Stanford CA
- Comparison of mix of uses in a city and of optimal mix of uses for a combined heat and power plant ([link to publication](#))  
Principal Investigators: Rob Best, Dr. Forest Flager, Dr. Martin Fischer
- 2009 - 2011      **Research Projects Coordinator for the Urban Morphology Lab**  
Scientific and Technical Construction Center (CSTB)
- Analyzed the relationships between urban morphology and energy consumption by comparing the urban fabric of 25 cities in Asia, Europe and America ([link to book](#))  
Studied the existing urban sustainability frameworks in Japan, Europe and the USA. Design of a set of sustainability indicators based on urban morphology.

## Teaching Experience

- 2016      **IPS 275: UN [Habitat 3](#), Bridging Cities and Nations to Tackle Urban Development**  
Lecturer, International Policy Studies, Stanford University

The class used design-thinking techniques to encourage students to adopt different perspectives on the challenges of bridging international policies and local implementation. The students led their own qualitative research projects based on interviews, and presented creatively their research and the New Urban Agenda at the Stanford Human Cities Expo in December 2016 at the Stanford d.school. The class also included a live coverage of the UN Habitat III conference, and featured guest speakers from academia, city governments, non-profits and companies.

- 2016 & 2017    **CEE 246: Entrepreneurship in Civil & Environmental Engineering**  
Teaching Assistant, Civil & Environmental Engineering, Stanford University
  
- 2016            **CEE 227: Global Projects Finance**  
Teaching Assistant, Civil & Environmental Engineering, Stanford University
  
- 2016            **CEE 200 C: Teaching of Civil and Environmental Engineering**  
Teaching team, Civil & Environmental Engineering, Stanford University  
  
Led a quarter-long program helping first-time TAs in Engineering improve their teaching skills.
  
- 2015            **IPS 274: International Urbanization Seminar: Cross-Cultural Collaboration for Sustainable Urban Development**  
Guest lecturer at Stanford and coordinator of the group activities with students from ESSEC.

## Invited Presentations

- 2017            **Berkeley-Stanford Organizational Behavior Conference**  
Haas School of Business, University of California Berkeley  
  
“How a Sovereign Development Fund shaped its network to become an institutional entrepreneur?”
  
- 2016            **UN Habitat III – Quito, Ecuador**  
Led an official side event on using Design Thinking to implement the New Urban Agenda.
  
- 2016            **CEE 323C Infrastructure Finance and Governance**  
“How can governments fund greenfield infrastructure? A case study of New South Wales, Australia”.
  
- 2015            **IPS 274: International Urbanization Seminar**  
“History of cultural preservation policies in Paris, France”
  
- 2015            **Impact Alpha Conference at Stanford University**  
Moderator for the session: “Generating Returns from Infrastructure Investing”

- 2014      **GPC Institutional Investors Club**  
 “The N33 Road in the Netherlands: pension funds and infrastructure finance: paving the way?”

## Awards

- 2017      **Centennial Teaching Assistant Award – Stanford University**  
 Recognizes and rewards outstanding contributions to teaching in the Schools of Humanities and Sciences, Engineering, and Earth Sciences
- 2014      **US Dept. of Energy (DOE) “Better Buildings Case Competition”**  
 Won the best proposal award for a financing model to incentivize distributed energy generation in multifamily affordable housing. Presented the solution at the DOE in Washington D.C.

## Fellowships & Industry Funding

- 2017      **Industry Funding - \$30,000**  
 Support to PhD research on sovereign wealth funds
- 2016      **Stanford UPS Grant - \$50,000**  
 Which Organizational Innovations can enable Institutional Investors to Successfully Invest in Urban Development and New Infrastructure Projects?
- 2015      **Industry Funding - \$20,000**  
 Support to PhD research on long-term investing
- 2014      **Dr. Charles Chiu-Hsiong Huang Fellowship - \$20,000**  
 Support to PhD program
- 2013      **Clarkson Oglesby Graduate Fellowship - \$20,000**  
 Support to Master program

## Relevant Work Experience

- 2013      **Business Development Director - Smart Cities Program**  
 Paris Region in San Francisco, USA (PRIME)
- 2013      **Planning Analyst**  
 Metropolitan Planning Group, Mountain View, CA, USA
- 2009 - 2011      **Research Projects Coordinator for the Urban Morphology Lab**  
 Scientific and Technical Construction Center (CSTB)
- Coordinated the work of 15 companies to market an integrated French offer for Eco-Districts in China. It led to presentations at the 2010 Shanghai Expo and international urban planning workshop.

## Publications

Pipeline: presented at conferences and to be submitted to journals

Nowacki, C., Monk, A. (2017) "Dancing with the Stars: How a Sovereign Fund became an Institutional Entrepreneur" **Academy of Management annual conference 2017**, Atlanta, USA ([link to working paper](#))

Nowacki, C., Monk, A. (2017) "How a sovereign fund shaped its social network to become a successful institutional entrepreneur" **European Group for Organizational Studies annual conference 2017**, Copenhagen, Denmark  
*Will submit to Academy of Management Journal*

Nowacki, C., Monk, A. (2017) "Using Machine Learning Techniques to Build a Taxonomy of Sovereign Investors" **Engineering Project Organization Conference (EPOC) 2017**, Lake Tahoe, USA  
*Will submit to Long Range Planning*

Nowacki, C.; Levitt, R.; Monk, A. (2016) "The Financier State as an Alternative to the Developmental State: A Case Study of Infrastructure Asset Recycling in New South Wales, Australia" **Engineering Project Organization Conference (EPOC) 2016** ([link](#))  
*Will submit to Research Policy*

## Journal Articles

Bennon, M., Monk, A., Nowacki, C. (2015) "Dutch Pension Funds Paving the Way for Infrastructure Development" **Journal of Structured Finance**

Bourdic, L., Salat, S., Nowacki, C. (2012) "Assessing Cities: A new system of cross-scale spatial indicators", **Building Research and Information**, 40(5), 1-14

Salat, S., Bourdic, L., Nowacki, C. (2012) "Assessing urban complexity" **International Journal of Sustainable Building Technology and Urban Development**, Available at: <http://www.tandfonline.com/doi/abs/10.5390/SUSB.2010.1.2.160>

Salat, S., Nowacki, C. (2011) "The Mediterranean urban development, a lesson of sustainability for the world" **International Journal of sustainable development (IJSD)**, volume 14

Salat, S., Nowacki, C. (2010) "La forme urbaine, un critère primordial du développement durable" **Regard sur la terre, "villes, changer de trajectoire"**, edited by Presses de Science Po, (AFD, IDDRI)

Salat, S., Bourdic, L., Nowacki, C. (2010) "Assessing urban complexity" **SUSB Journal**, Hangyang University, Korea

Salat, S., Nowacki, C. (2010) "De l'importance de la morphologie urbaine dans l'efficacité énergétique des villes" **Liaison énergie francophonie: "énergie et territoire"**, edited by Ademe, institut énergie environnement francophonie

## Book & Book Chapters

Salat, S., Labbe, F., Nowacki, C. (2011) *Les Villes et les Formes : Sur l'Urbanisme Durable*  
English version: Salat, S., Labbe, F., Nowacki, C. (2011) ***Cities and Forms: On Sustainable Urbanism***

Salat, S., Nowacki, C. (2010) "Rethinking the city, combining its form and flows" in ***Cities, steering toward sustainability***, edited by Pierre Jacquet, Rajendra K Pachauri, Laurence Tubiana

Salat, S., Nowacki, C. (2010) "Urban morphology and the quest for zero carbon cities" in ***Towards 0-impact Buildings and Built Environments***, Techne Press

## Conferences

Best, R., Flager, F., Nowacki, C., Fischer, M., Lepech, M. (2014) "Optimizing the Total Fuel Cycle Efficiency of an Idealized CCHP-Powered Community in Oakland, CA" **International Symposium on Sustainable Systems and Technology (ISSST)**, Proceedings: [\(link\)](#)

Roedel, H., Aubuchon, P., Desai, S.; Grey, F.; Havelia, P.; Nowacki, C.; Lepech, M.; Loftus, D. (2014) "Life Cycle Assessment of Protein-Soil Composites for Sustainable Construction" **International Symposium on Sustainable Systems and Technology (ISSST)** [\(link\)](#)

Salat, S., Bourdic, L., Nowacki, C. (2011) "Assessing cities, a new system of spatial indicators" **World Sustainable building conference, Helsinki**

Salat, S., Nowacki, C. (2010) "Urban morphology and the quest for zero carbon cities" **SB Netherlands**

Salat, S., Nowacki, C., Hiver, B. (2010) "City fabric and energy efficiency: case studies in morphological assessment of the sustainability of cities" **SB Finland**

Salat, S., Nowacki, C., Vialan, D. (2010) "Morphological indicators for assessing the sustainability of cities" **SB Finland**

Salat, S., Nowacki, C., Vialan, D. (2010) "A common metrics and set of indicators for assessing buildings and urban fabric sustainability performance" **SB Prague: Central Europe towards sustainable building**

Salat, S., Nowacki, C. (2010) "A "one system approach" to global Chinese urban growth: A prototype of eco neighborhood in Shanghai" **Joint publication by Tianjin University and Hong Kong University**, Available at: [www.hkpgbc.org/tianjin/paper/fullpaper-serge-salat.pdf](http://www.hkpgbc.org/tianjin/paper/fullpaper-serge-salat.pdf)

## Publications for a general audience

Nowacki, C., Levitt, R, Monk, A. "How America can copy Australia's asset recycling scheme" **The Conversation, Australia** [\(link\)](#), June 2017

Salat, S., Nowacki, C., “La tour n’apporte pas la densité” **Place Publique**, La revue urbaine, Rennes-Saint Malo, Mai-Juin 2012

## Service

### **Ad hoc reviewer**

Cities, Elsevier

Engineering Project Organization Conference

## Languages and IT

French (native), English (fluent), Spanish (advanced), Italian (conversational), Korean (conversational)

Proficient in Microsoft suite; InDesign; Illustrator; R programming

Notions in python and java programming

## Personal Interests

2015 - 2017      **Fitness Instructor for Stanford Aerobics & Yoga**  
Teach urban dance, K-pop dance and aerobic kickboxing

2015 - 2017      **Rosie’s Cabinet - Improv club**  
Lead improvisation sessions & perform in improv shows

## References

### **Ashby H.B. Monk, PhD**

Executive and Research Director, Stanford Global Projects Center

Senior Research Associate, University of Oxford

Senior Advisor to the Chief Investment Officer of the University of California

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### **Raymond E. Levitt, PhD**

Kumagai Professor in the School of Engineering

Senior Fellow at the Woods Institute for the Environment

Director, Global Projects Center, Stanford University

Tel: +1 (650) 723-4447 - [rel@stanford.edu](mailto:rel@stanford.edu)

### **William P. Barnett, PhD**

Thomas M. Siebel Professor of Business Leadership, Strategy, and Organizations

Affiliated Faculty, Woods Institute for the Environment

BP Faculty Fellow in Global Management for 2016-2017

Director, Stanford Executive Program: Be a Leader Who Matters

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