

The Transportation Center: *Bridging the Future*

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Presentation to the BAC
May 4, 2017



Northwestern University
Transportation Center

BAC
2017
SPRING

Business Advisory Council
SPRING MEETING
THURSDAY, MAY 4, 2017 [8:00 AM]

FORD MOTOR COMPANY ENGINEERING DESIGN CENTER
2133 SHERIDAN ROAD, EVANSTON, ILLINOIS 60208

Strategic Vision: A Refresher

- Pre-eminent think-tank and laboratory in the world for *cutting-edge research that matters* on a global scale.
- Provide the *premier educational program* in transportation systems.
- Essential academic partner for *novel, high-impact collaborative* research.
- Advance state of practice industry applications through a mix of engaged *application-driven research* and *fundamental advances*.

Progress Highlights:

BAC Membership (since last meeting)

- **7** new companies (**14** new members)

Funded Research Activity

- Active: **8** projects **\$1.7 M**, **7** faculty
- Submitted (9/1–5/1): **11** proposals **\$1.9 M+**, **14+** faculty

Students

- **20** PhD students in Transportation Systems (T.S) program
 - **5** supported via dissertation year fellowships
- **14** MS students in T.S. program (10 new '16-'17)
- **13** current T&L minor students (2 graduating in June)
- Strong recruiting year for 2017-2018



BAC: Update on Membership

- A strong year in terms of recruitment, retention of companies, events, and engagement
- Active research investigations with several BAC companies
- Actively seeking more opportunities to engage individual companies and/or consortia in research support and collaboration
- Active membership committee, several new prospects



BAC: New Membership Leadership

Stifel

Sustaining

AAR Corporation

Columbia Helicopters

Atlas Air Worldwide Holdings

Uber Freight

Wells Fargo Rail

Association

UITP

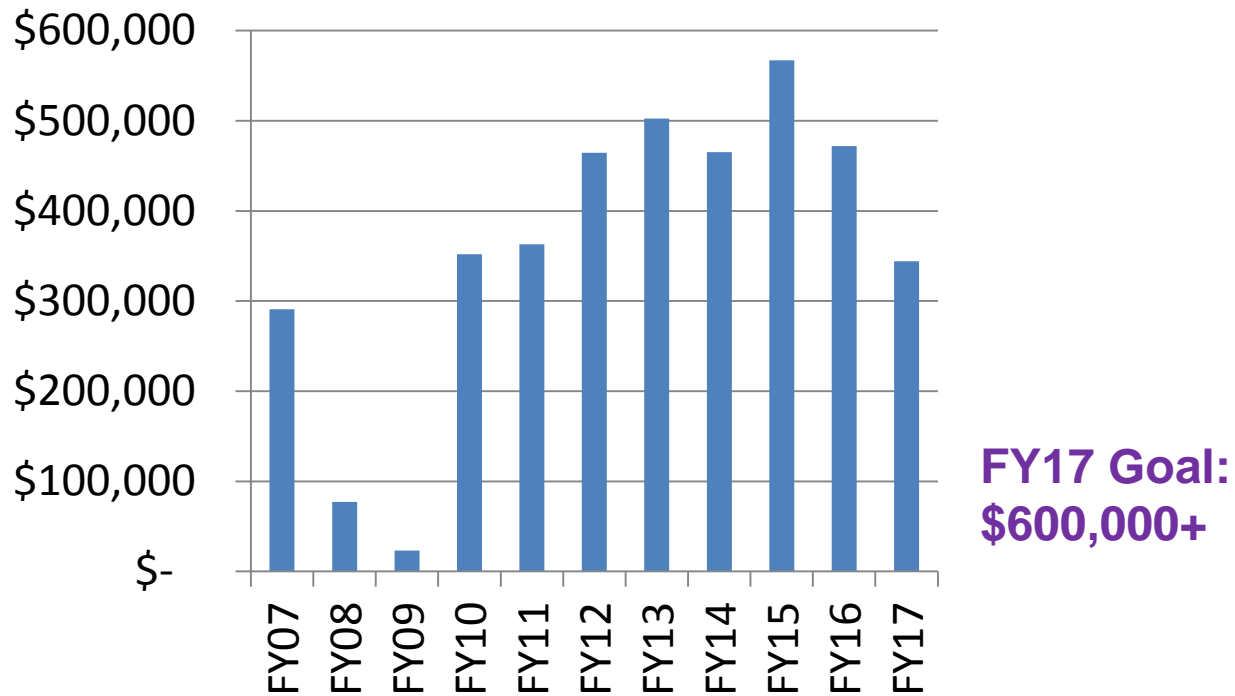
STIFEL



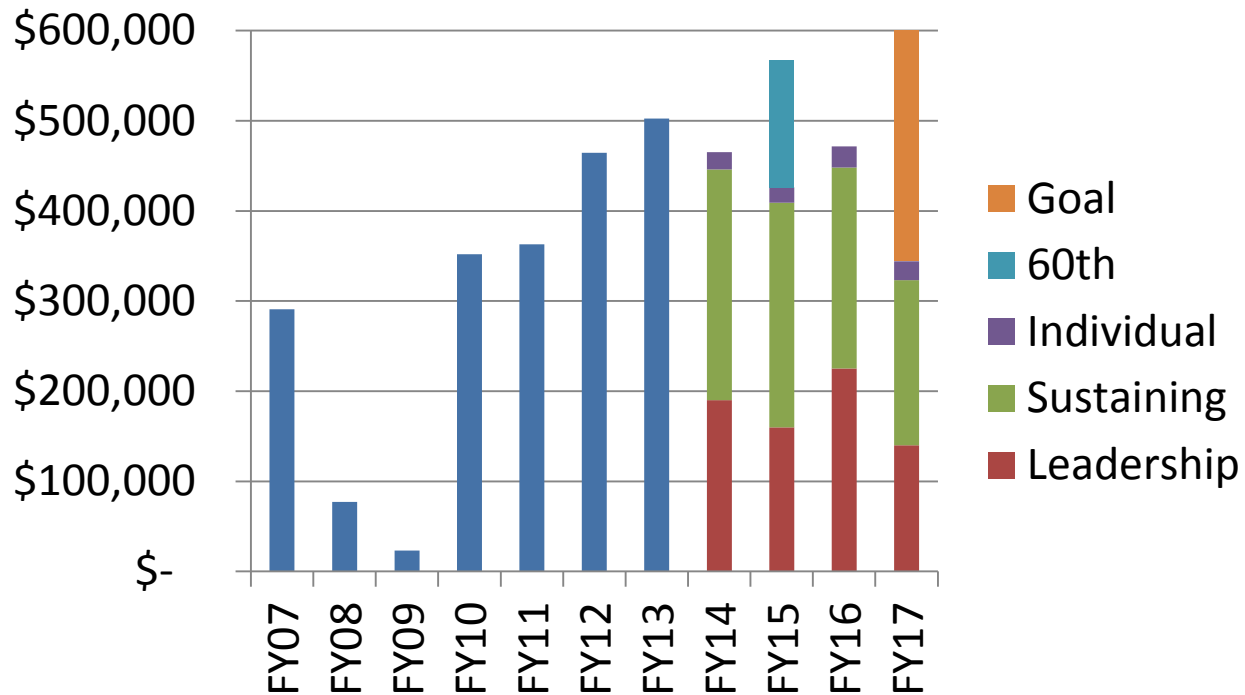
UBER



BAC Contributions: FY07 – FY17



BAC Contributions: FY07 – FY17



Faculty Awards / Honors (I)



Zdenek Bazant

Elected to the Academy of Athens



Charles Dowding

**Named Distinguished Member of the
American Society of Civil Engineers**

Faculty Awards / Honors (II)



Joseph Schofer

S.S. Steinberg Award

from The American Road and Transportation
Builders Association



Karen Smilowitz

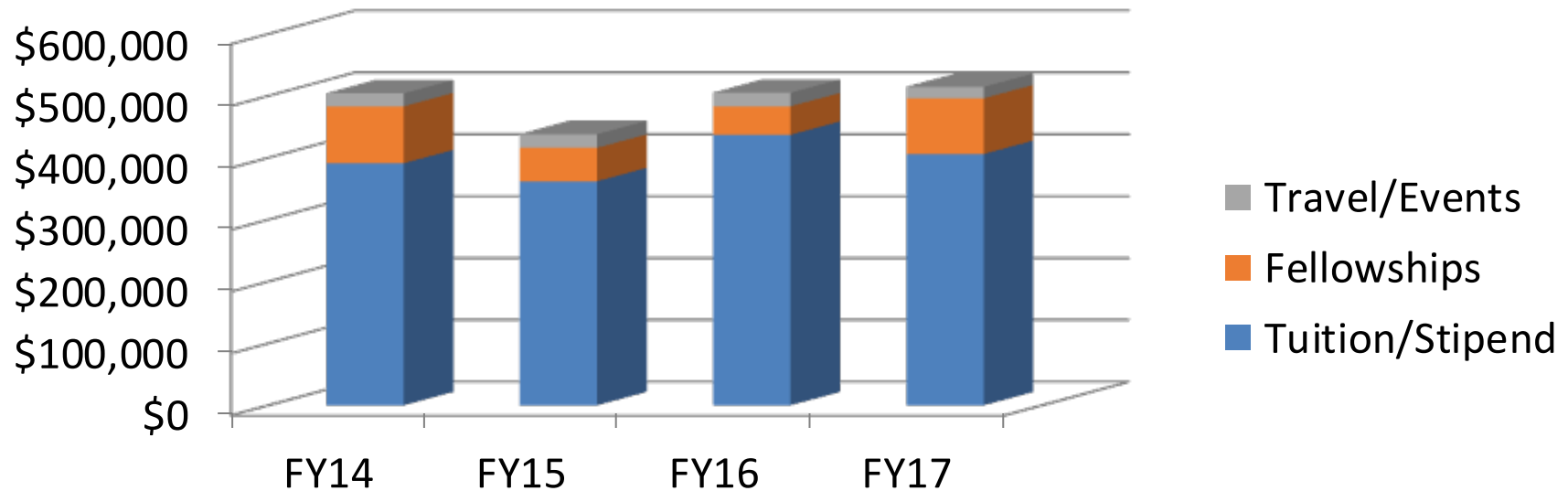
**2016 recipient of the Award for the
Advancement of Women in Operations
Research and the Management Sciences**
by INFORMS

Students: Our Core Mission (I)

- TC adds *value to student experience* through industry exposure, seminars by authorities in the field, travel funds for conferences, fellowship stipends— essential differentiator for recruiting top talent
- Many opportunities for *undergraduates* interested in transportation; increasing engagement in research, *internship* placement with *BAC companies*
- *Industry support is critical* to our mission and to making a Northwestern Education in Transportation the unique experience it is.

Students: Our Core Mission (II)

Direct Student Funding Through NUTC



Students: NUvention Transportation

- Interdisciplinary, experiential course created in collaboration with and led by the Farley Center for Entrepreneurship and Innovation, designed to teach students about creating businesses in the transportation sector.
- Made possible by a gift from Boeing.
- *BAC members served as guest speakers in fall 2016 course: Allen Adler (Boeing), Chris Pickett (Coyote); and serve as Advisory Board members (and student mentors): Tony Belkin (HERE) and Chris Pickett.*
- Contact Bret if interested in participating in Fall 2017 course



COYOTE →





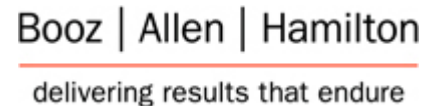
Research Activities (I)

Industry Research

- **HERE**
- **Hub Group**
- **UILabs**
 - **Microsoft**
 - **Mastercard**

Industry Teaming

- **Booz Allen Hamilton**
- **Leidos, Inc.**
- **SETS, Inc. (Middle East)**
- **Various small businesses**



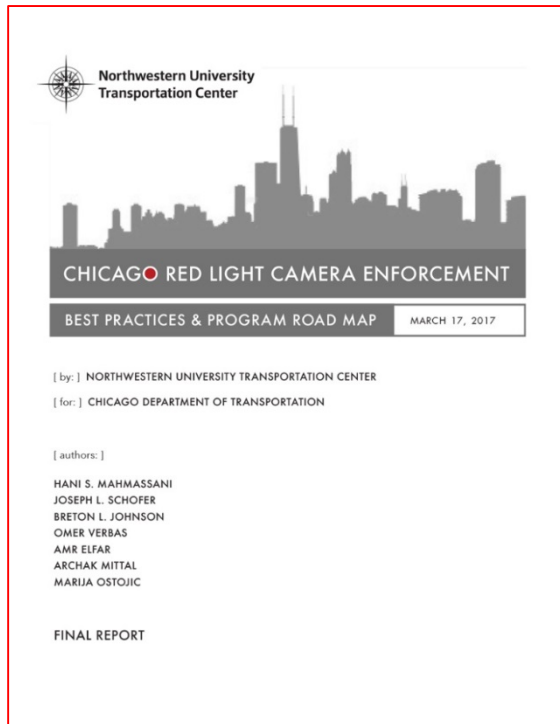
Research Activities (II)

Public Agencies / Federal Research

- **Chicago Department of Transportation**
- **Chicagoland Metropolitan Agency for Planning**
- **Federal Highway Administration**
- **METRA**
- **United States Department of Labor**



Research Activities (III)



Chicago Red Light Camera Report

- *Assessment of Chicago's RLC program impact on safety*
- *Overall decrease in injury-producing crashes attributed to RLC enforcement*
- *Significant safety "spillover effect" to non-RLC intersections*
- *Recommended grace period extension*
- *Methodology for continuing performance assessment and scoring intersections.*

Selected Outreach Activities (I)



- **Discounted Rates available for BAC member companies**
- Superb speaker list: Coyote, CSCMP, DSC Logistics, Echo Global, Nippon Cargo, Schneider, Teradata, Uptake, Wells Fargo Rail, and more... and Northwestern faculty

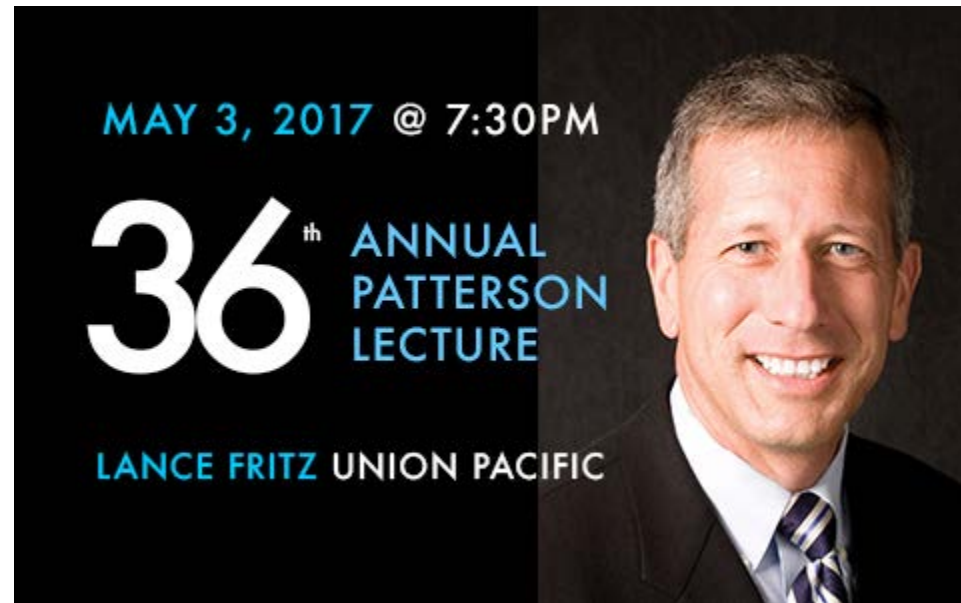
Freight Transportation and Logistics

Navigating the Growing Challenges from the First Mile to the Last Mile in Transportation
May 22 -24, 2017

Selected Outreach Activities (II)

Patterson Lecture in Transportation

Lance Fritz
Chairman, President &
CEO
Union Pacific Railroad



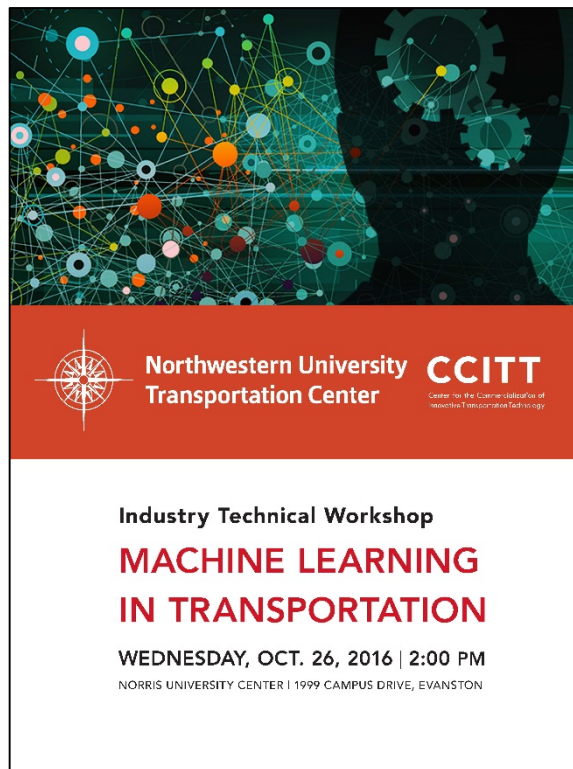
"Connecting People, Creating A Better Future—Why International Trade Benefits America"

Selected Outreach Activities (III)


- **The 22nd International Symposium on Transportation and Traffic Theory**
 - Hosting in Evanston, Illinois
 - July 24-26, 2017



Selected Outreach Activities (IV)



The poster features a dark background with a network of colorful nodes and lines, and a silhouette of a human head with gears inside. The text is in white and red.

 Northwestern University Transportation Center **CCITT**
Center for the Commercialization of Innovative Transportation Technology

Industry Technical Workshop
**MACHINE LEARNING
IN TRANSPORTATION**

WEDNESDAY, OCT. 26, 2016 | 2:00 PM
NORRIS UNIVERSITY CENTER | 1999 CAMPUS DRIVE, EVANSTON

Fall 2016



The poster features a background of a large-scale infrastructure project, possibly a bridge or tunnel, with a red and blue color scheme. The text is in white and teal.

 Northwestern University Transportation Center **CCITT**
Center for the Commercialization of Innovative Transportation Technology

Industry Technical Workshop
**BRIDGING THE FUTURE
INNOVATION IN LARGE-SCALE
INFRASTRUCTURE DEVELOPMENT**

WEDNESDAY, MAY 3, 2017 [1:00 PM]
JAMES ALLEN CENTER | MCCORMICK AUDITORIUM | 2169 CAMPUS DRIVE

Spring 2017



NUTC Fundraising Campaign

- **STRATEGIC RESEARCH FUND**

- Freight, Logistics & Economic Competitiveness
- Data-Driven Operations & Analytics
- Sustainable Practices
- Safety
- Urban Logistics and Smart Cities

- **ACCOMPLISHMENTS**

- October 2015 outreach mission to New York City with Paul Schneider (Greenbriar, Morgan Stanley, Scott-Macon)
- Fundraising Strategic Messaging Sessions facilitated by Coyote Logistics (Paul to share later)
- Targeted Outreach Lists Developed (dynamic)

Closing Thoughts

- *NUTC remains focused on the future*
 - Autonomous and connected vehicles, trucks
 - Innovation in logistics and supply chain operations
 - Last mile supply chain logistics
 - Internet of Things and smart cities
- ***NEXT BAC MEETING***
 - ***October 18-19, 2017***



Thank you!

BAC: New Members Here Today

Leadership

Roger Norber

*Executive Vice President, Law &
Corporate Affairs, & CEO, **BNSF
Railway***



John Larkin

*Managing Director and Head of
Transportation Capital Markets
Research, **Stifel Financial Corp***



BAC: New Members Here Today

Leadership

Peeter Kivestu

*Transportation and Logistics Industry
Consultant, **Teradata***



BAC: New Members Here Today

Leadership

Jason Birnbaum

*Vice President, Operations
Technology, United*



Tracy Lee

*Vice President, Network Operations,
United*



BAC: New Members Here Today

Sustaining

Andrew Schmidt

*Senior Vice President, Intelligent
Solutions, AAR Corp.*



Alexander Setness

*Managing Director, Bank of America
Merrill Lynch*



BAC: New Members Here Today

Sustaining

Charmin Tillman

*Chief Marketing Officer, GE
Transportation*



Bill Driegert

Director, Uber Freight



BAC: New Members Here Today

Sustaining

Israel Alguindigue

*Senior Vice President, Industrial
Analytics, Uptake Technologies*



Brad Keywell

*Co-Founder & CEO, Uptake
Technologies*



BAC: New Members Here Today

Association

Andrew Bata

*Regional Manager – North America,
UITP (Union Internationale des
Transports Publics)*



Guests Here Today (I)

- **Noam Alon**, Managing Director, Innovation and Engagement, United
- **Sebastian de Meel**, Partner, PricewaterhouseCoopers Advisory
- **Jeffrey Elliott**, Partner, PricewaterhouseCoopers Advisory
- **Ricardo Giesen**, Director & Associate Professor, Dept. of Transportation Engineering & Logistics, Pontificia Universidad Catolica de Chile
- **Kevin Glynn**, Vice President & CIO, DSC Logistics
- **Mary Gros**, Director of Business, Teradata

Guests Here Today (II)

- **Chris Kettering**, Enterprise Technology Leader, Platform Performance & Structures, Boeing
- **Jamie McCurry**, Senior Director, Administration & Government Affairs, Georgia Ports Authority
- **Grainne McNamara**, Principal, PricewaterhouseCoopers Advisory
- **Andrew Neff**, Senior Market Intelligence Leader, GE Transportation
- **Monali Shah**, Director, Intelligent Transportation, HERE
- **Srinivasan Sriram**, Founder & CEO, Skuchain
- **Michael Wang**, Principal, Greenbriar Equity Group