



Our Transportation Center: *Celebrating 60 Years*

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Presentation to the BAC
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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: 2013- 2014 (I)

BAC Membership (since last meeting)

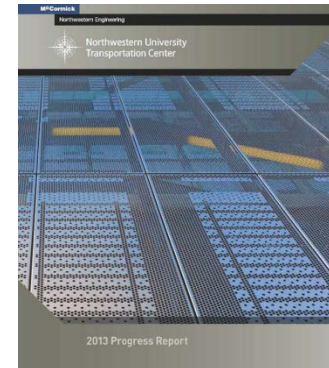
- **2** new companies (**2** new members)

Funded Research Activity

- Active: **12** projects **\$1.1 M**, **6** faculty
- Submitted: **15** proposals **\$19.2 M**, **20** faculty

Graduate Students

- **17** supported via research projects
- **4** supported via dissertation year fellowships
- **\$504k** in support (travel, tuition, stipend, fellows, etc.)



BAC: New Sustaining Companies

Zubrod / Clair

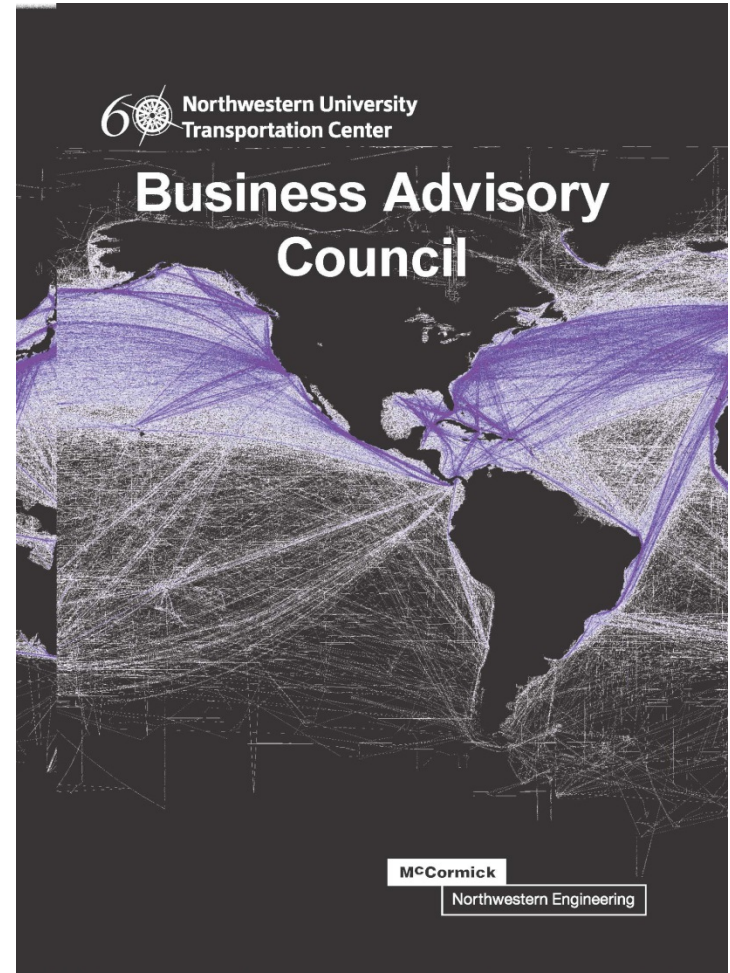
Zubrod/Clair™

Milestone Equipment
Company



BAC

New Directory



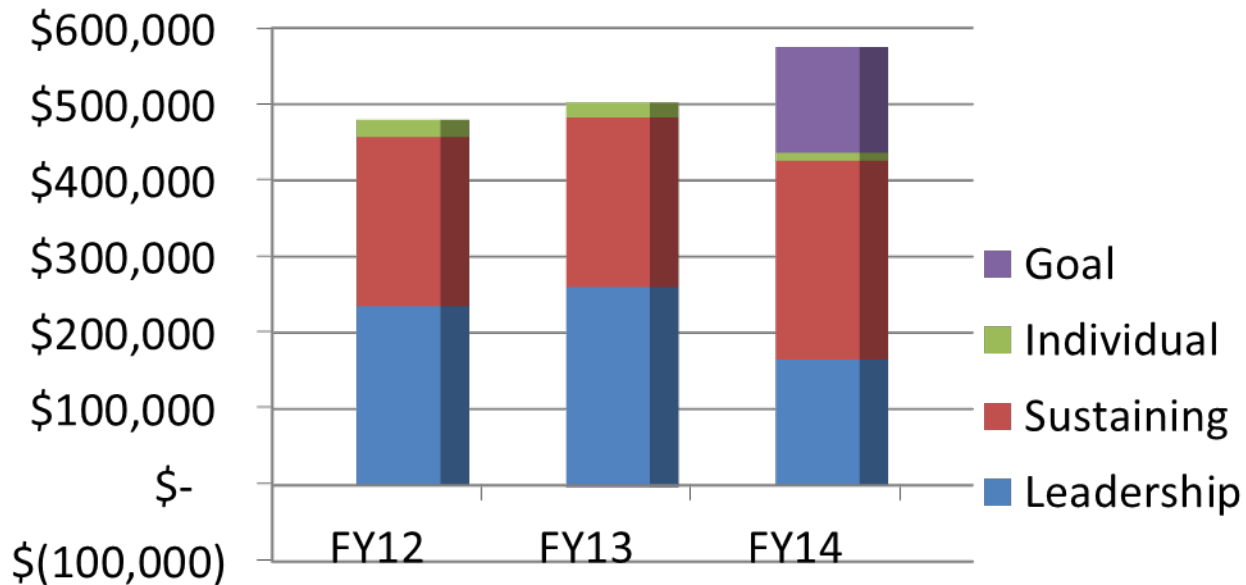
BAC Members: Awards / Honors (I)



Dr. Craig Philip

Elected to the *National Academy of Engineering*

BAC Contributions: FY12, FY13, FY14



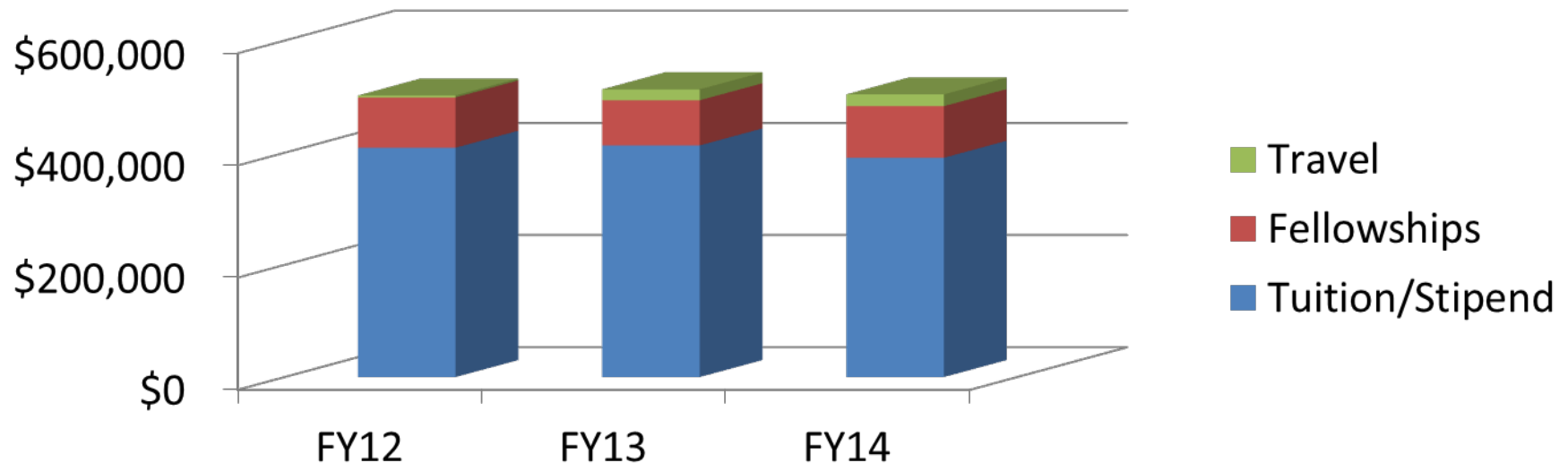
FY 12	\$400,000	\$257,000	\$464,500
FY 13	\$500,000	\$335,500	\$505,000
FY 14	\$575,000	\$436,500	?

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



Selected Outreach Activities (I)

Sandhouse Gang (Rail)

9/2013 –5/2014

- Development of Strategic Plan & Research Agenda, National Cooperative Railroad Research Program
- One Man Wrecking Crew: How Ben Heineman Derailed the Rock Island-Union Pacific Merger
- Santa Fe's 1951 Kansas City Flood
- Looking Ahead to 2014 in the Railroad Industry
- A Conversation with Don Orseno
- Freight Rail Economic Development
- Building Consensus for CTA's Red Line South Reconstruction Project
- A Personal Look at 50 Years of Railroad History

Selected Outreach Activities (II)

Icarus Society (Aviation)

1/2014 –5/2014

- The Science of Sleep: Aviation Rest and Fatigue Regulations for Pilots
- The O'Hare Modernization and Chicago Airspace Project
- The Flight Plan- Vision, Leadership and Culture
- Airline Hubs: Blessing, Bane...or Both?

Selected Outreach Activities (III)

Executive Education



Freight Transportation and Logistics

September 15-17, 2014

Selected Outreach Activities (IV)

Training Programs



Leveraging, Integrating, Networking, Coordinating Supplies (LINCS) for Supply Chain Management (SCM)

Consortium Members: Broward College (Lead), Columbus State CC, Essex County College, Florida State College at Jacksonville, Georgia Institute of Technology, Harper College, Long Beach City College, Rutgers University, San Jacinto CC, St. Petersburg College, Union County College, **NUTC**

Partner: Council for Supply Chain Management Professionals

Goal: Develop eight standardized supply chain management *training programs* for entry and middle-level employment: Supply Chain Management; Demand Planning; Procurement & Supply Management; Manufacturing & Service Operations; Transportation Management; Inventory Management; Warehousing Management; Order Fulfillment & Customer Service



Research Activities (I)

Industry Research

- **Boeing**
- **BNSF**
- **Coca Cola**
- **Echo Global**
- **U.S. Bank**



Research Activities (II)

Selected Proposals Submitted

- **Commercial Remote Sensing & Spatial Information Technologies Program**
 - Leveraging remote sensing and emerging digital data sources to support relief and recovery operations in major flooding areas
 - Boeing, partner + public agency support
- **Sustainability Research Networks Competition (SRN), 2014 Focus: Urban Sustainability**
 - Centerpoint Properties, DSC, JLL, UPS + 30 other public & private partner letters of support
- **Federal Highway Administration Exploratory Advanced Research Program**
 - (1) Virtual Nondestructive Evaluation (NDE) Laboratory for Highway Structures
 - (2) Behavioral based (or agent based) National Freight Demand Modeling
 - CSX, Echo Global, Navistar, Ruan letters of support

International Outreach

- New National Transportation Center for Ministry of Transport, KSA: Strategic plan and design completed
- Crowd dynamics and mobility studies, Umm-Al-Qura University, KSA
- Active collaboration with TU-Delft (NL), EPFL (Lausanne, CH) and KTH-Stockholm (SW) in various areas.
- Rajawali Corporation – Jakarta, Indonesia
 - Executive Education Program successfully completed in August 2013; targeting updated effort in 2015
 - Additional opportunities to be determined
- Ministry of Home Affairs, Indonesia – new training programs under development

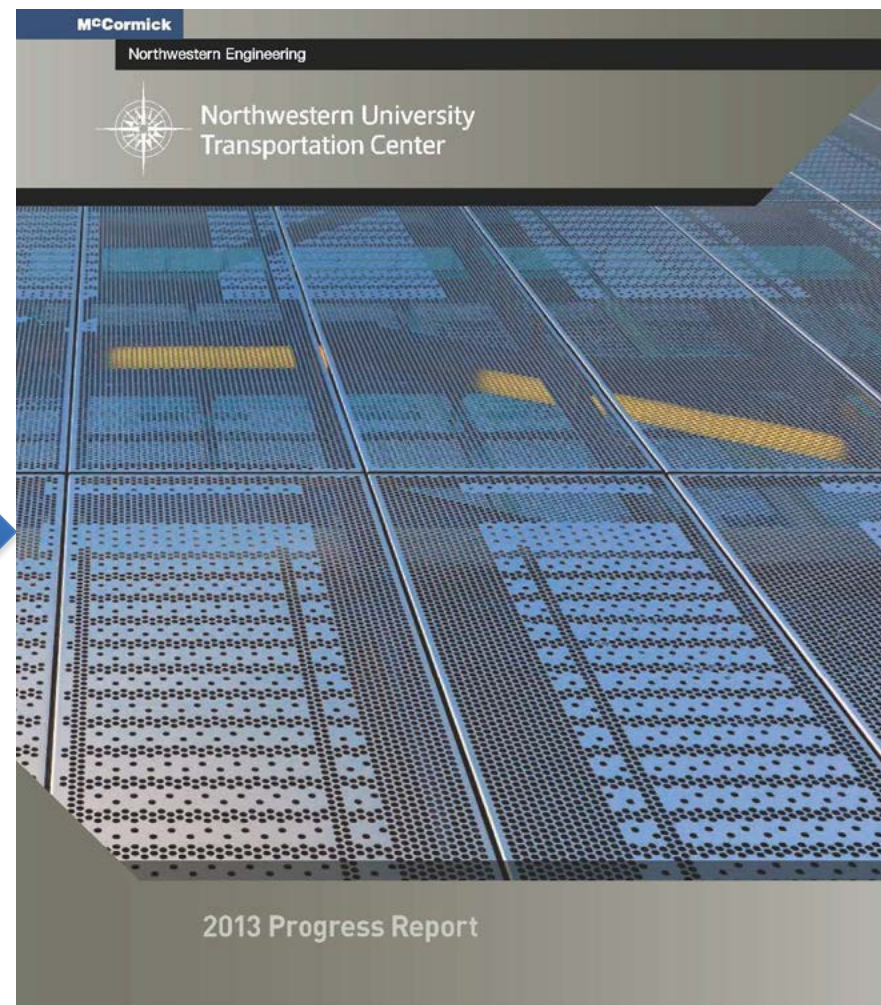
Upcoming Event

Program Review of the Transportation Center

- Timeframe: 2014-2015 academic year
- Previous review: 1998-1999
- BAC members may be contacted by a review committee comprised of internal and external reviewers
- All academic departments, major research centers, and administrative units are reviewed once every seven to ten years through the Program Review process. 4 Phases:
 - Collection and analysis of unit data and survey feedback.
 - Identification of key issues and a self-study by the unit faculty and/or staff.
 - Visit to and evaluation of the unit by a review team comprised of senior faculty and staff members and external reviewers from exemplary peer programs.
 - Implementation of recommendations agreed upon by the unit and central administration.



**MORE
HERE**





McCormick

Northwestern Engineering

Save the date for an event 60 years in the making...

The Transportation Center's 60th Anniversary Celebration

**November 13-14, 2014
Northwestern University**

NUTC 60th Anniversary Celebration: 1954-2014.

- ON-CAMPUS SYMPOSIUM: ALUMNI, FACULTY and BAC:
 - Gala dinner/festive event
 - Full day symposium on day transportation issues
 - ½ day event alumni and faculty reminiscences
- Alumni events in different cities around the country:
DC, NYC, SFO
- FACULTY & BAC steering committees
- ALUMNI/BAC 60th Committee— Fundraising Opportunity
for *Long-Term Excellence Fund/Endowment*

Closing Thoughts

- Considerable research opportunities and needs in the Transportation sector, and growing gap in educated workforce at many levels.
- **AT NORTHWESTERN**
 - Uniquely successful industry-engaged approach to transportation research and education
- What we do at the NUTC matters
 - BAC engagement and support critical to what we do, and how well we do it



Thank you!

BAC Governance

- Goal: Engage BAC members and capture your ideas, suggestions and guidance
- Working committees
 - BAC Membership – continuously active
 - 60th Anniversary Committee – active since fall 2013
 - R&D Committee – newly formed
 - Meeting Planning Committee – newly formed
 - Executive Education Committee – previously ad hoc, but gaining traction
 - Patterson Lecture Committee – in development



Membership Committee

- Vicki Bretthauer
- Lee Clair
- Norm Carlson
- Ann Drake
- Rob Hart
- Kathleen Ross
- Justin Zubrod

- Several candidates identified, invitations made, invitations in progress
- Target Areas: Shippers, International Carriers, Trucking / Logistics companies, Transportation Equipment / Systems Manufacturers, Technology Providers



60th Anniversary Committee

- Paul Schneider, Chair
- Justin Zubrod
- Jean Regan
- Jim Rankin
- Vicki Bretthauer
- Paul Nowicki
- Mike Burton
- Norm Carlson

- Venues identified, Dinner & Symposium events outlined, programs & speakers in development, Save the Date pending this June



R&D Committee

- Peeter Kivestu
 - Regis Luther
 - Ben McClean
 - Joshua Schank
-
- Kickoff meeting held to welcome speakers
 - Hani Mahmassani / Karen Smilowitz – key NUTC faculty members



Meeting Planning Committee

- BAC Chairman – Justin Zubrod
- Price Blackford
- Mike Burton
- Jean Regan
- Paul Schneider
- Rich Thompson

- Kickoff meeting held to welcome speakers
- Meeting set for Sept. 2014

Executive Education Committee Patterson Lecture Committee

- Executive Education Committee to date ad hoc with Justin Zubrod and Lee Clair helping to lead development of several Freight Courses
- New courses and new committee members in development
- Patterson Lecture Committee in development



BAC: New Leadership Members Here Today



Robert Knight
Chief Financial Officer



BUILDING AMERICA®



BAC: New Sustaining Members Here Today



Heidi Hornung-Scherr
Partner



Rob Maidman
Senior Product Manager





Guests Here Today

- Ken Evans, President, Koch Logistics
- Randall Frost, Manager, Canal Barge Co.
- Kelly Gray, Vice President, JLL
- Ken Heller, Senior Vice President, DSC Logistics
- Peeter Kivestu, Director, Teradata
- Majid Naghshineh, Engineering Manager, Navistar
- Tom Tisa, Director, Canadian National Railway