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Northwestern Engineering

Northwestern University Transportation Center

Our Transportation Center: Keeping the Momentum

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Presentation to the BAC November 4, 2009

Where We Are Heading: Strategic Goals

- Pre-eminent think-tank and laboratory for cutting-edge transportation research “that matters” on a global scale
- Premier educational program in transportation systems
- Essential partner for novel, high-impact research
- Advance state of practice through mix of engaged application-driven research and fundamental advances



Expanded Transportation Research Activity at Northwestern

- Tripled value of sponsored research to over \$2.75M in 09; additional contract programs \$2.25M
- Funded 14 research projects
- Submitted more than \$15.5 M worth of research proposals involving 20 faculty members
- Acquired Center for the Commercialization of Innovative Transportation Technology – a USDOT funded “University Transportation Center”

Research: NU Programs & Partners

- The Center for The Commercialization of Innovative Transportation Technology
 - DOT Tier II University Transportation Center (Bret Johnson, director)
 - Funded 7 projects to date
 - Part of TC since Summer 2009
- NU Research Collaborators
 - ISEN (M. Ratner and D. Dunand, co-directors)
 - Institute for Massive Change (Bruce Mau, director)
 - Infrastructure Technology Institute (Joseph Schofer, director)
 - Center for Operations and Supply Chain Management
 - Institute for Sustainable Practices (K. Gray & D. Dana, co-directors)
 - Center of Energy-Efficient Transportation



Research: Teaming Partnerships

- SAIC
- Delcan Corporation
- Volpe National Transportation Systems Center
- Argonne National Lab
 - Workshop under new ISEN initiative
 - Researcher seminars and visits
- Illinois Center for Transportation
 - Partnering in projects with IDOT
 - Closer strategic coordination



Research: Global Alliances in Development

- **Canada:** U of Montreal
- **Latin America:** Chile (U Chile, Catholic U), Panama
- **Europe:** TU-Delft (NL), INRETS (France), P. Catalunya (Barcelona, Spain), DLR (Germany), VTT (Finland), TOI (Norway), Volvo Research (Sweden), ETH-Zurich & EFTP-Lausanne (SW), Chalmers University of Technology (Sweden)
- **Middle East:** AUB (Lebanon), Saudi Higher Education Ministry, Technion (Israel)
- **Asia:** IIT-Madras (India), various universities in China, Taiwan, Hong Kong

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BAC: Grow membership & meet needs





BAC: Emerging Collaborative Research Opportunities

- Sustainable Transportation
- Information Technologies to Benefit the User Experience
 - Freight and passenger
 - Business intelligence in support of marketing, operational efficiency
 - New focus on Design
- Policy and Economics
 - Pricing, public-private, collaborative platforms
- Humanitarian Logistics
 - Extreme events
 - Efficient operations in normal times

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BAC: New Members



A.Y. (“Butch”) Bingham, CEO and Owner,
Bulkmatic Transport



Dan Spellman, Vice President, Logistics
Development & Supply Chain Services



Todd B. Carter, Vice President & General
Manager Global Transportation Management



D. Stephen Menzies, Senior Vice President &
Group President, Trinity Rail

Business Model: Increase Revenue Streams

- Support for core TC operations and programs exclusively from private sources: BAC membership dues, donations, alumni giving, and endowment income
- Support for student stipends and research largely through sponsored research projects and grants: government and corporate; deliverable-oriented, lacks flexibility
- Increase revenue through new executive programs and technical assistance contracts
- Collaborative industry-university initiatives in major challenge areas
- **Contributed funds for seed research and student fellowships**

Summary of Revenue Potential

	FY 2010	FY 2011	FY 2012
Exec Programs	\$200,000	\$220,000	\$240,000
BAC Support	\$250,000	\$300,000	\$300,000
Research	\$2.5 M	\$3.5 M	\$5.0 M
Gifts, Income, Endowments	\$60,000	\$65,000	\$70,000

Getting There: Corporate Support

- Add value to BAC involvement
 - Formulation of strategic research agenda; critical themes
 - Increased collaboration and research engagement
 - Meet the needs of the transportation community
- Goal
 - Minimum of \$300,000/yr

Getting There: Executive Program

- Fall 2009: Transportation infrastructure Pricing
- AY10: 1 or 2 more courses expected (incl. “Coping with Carbon” in Spring ‘10)
- Custom courses for BAC members and others
- International Exec Ed opportunities similar to Saudi Arabia project; collaborate with other universities around the world

Executive Program Classes

- **New Course:** “Pricing Transportation Infrastructure” – November 16-18,2009
- **Next Course** in development: “Coping with Carbon” – Winter or Spring 2010
- **Focus:** strategic issues; timeliness; high policy relevance; unique NUTC expertise

Getting There: Research Contracts

- USDOT funded projects
 - CCITT, Tier II UTC; through 2010
 - New University Transportation Center (UTC); led by TC; \$5 million per year
- Sponsored Research
 - Active: \$2.75 M (14 research projects) in FY 2009
 - Submitted: 35 proposals, ~\$15.5 M, 20 faculty

STUDENTS: OUR CORE MISSION

- 9 new graduate students in Fall 09; top schools, excellent diversity, highly recruited--largest incoming class in past 10 yrs
- 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.



Steps to Move Ahead

- Recruit Staff to Support Growth
 - Associate Director, Strategic Projects & Relations ✓
 - Marketing Communications Specialist
 - Business Manager
- Engage BAC and enhance membership strategy and value proposition
- Enhance Brand, Outreach & Influence
 - Web & print communications, conferences, executive education, research collaborations, faculty participation