Virginia Logistics Research Center

Update Presentation to Logistics Task Force
Richmond, Virginia

November 4, 2011
Presentation Outline

- Update on VLRC
  - Mission
  - Vision
  - Partners
  - Research Agenda
  - Workforce Development
  - Governance
  - Financial
  - Milestones
- Open Issues
- Work Stream Priorities
- Questions and Discussion
Mission

• Provide transformational improvements in logistics systems
  – Reduce cost
  – Improve quality and dependability
  – Reduce time to market

• Bridge the gap between research and commercialization
  – Accelerate solutions into markets
  – Solve real problems for industry and government

• Foster collaboration among diverse industry sectors
  – Directed Research for the benefit of an individual member
  – Generic Research for the benefit of all member companies

• Lower the cost of applied research for member companies
  – Shared facilities and personnel
  – Shared pre-competitive research

• Train the next generation of technology leaders
  – Provide market ready experience to students
  – Connect industry with students
Vision

• A global Center of Excellence in logistics systems
  – Creating new technologies
  – Enabling new solutions
  – Fostering collaboration across industry sectors

• A cornerstone of a Virginia Logistics Innovation Zone
  – Expanding research capability
  – Improving workforce quality and quantity
  – Stimulating economic development

• VLRC growth in 10 years to:
  – 49 full-time resident PhD-level research staff
  – 35 resident graduate research assistants
  – 35 resident undergraduate interns
  – More than 30 Industry Members
  – Sustainable and diversified research portfolio
Partners

• **Academic Partners**
  – Longwood University
  – University of Virginia (New, January 2011)
  – Virginia State University

• **Defense Community**
  – Sustainment Center of Excellence (Fort Lee)
  – Army Logistics University
  – Defense Supply Center Richmond (DLA)

• **Public Sector**
  – Virginia Economic Development Partnership (VEDP)
  – Crater Planning District Commission (CPDC)

• **Industry**
  – Logistics Management Resources (LMR)
  – Boehringer Ingelheim Chemicals, Inc
  – LMI (New, April 2011)
University Expertise

Paul Barrett
Financial Planning
Workforce Development

Melody Eaton
Health Care Management
Nurse/Patient simulation

Jim Haug
Contracts Management
Federal Acquisition Planning

Ron McPherson
System Engineering
Operations Research

Christopher Caldwell
Ethical Theory
Inference Models

Peter Beling
Optimization Theory
Decision Making

Barry Horowitz
Supply Chain Security
Service Software Systems

Randy Cogill
Process Modeling
Optimization and Scheduling

James Lambert
Multimodal Transportation
Risk & Decision Analysis

Majid Amini
Learning Systems
Applied Ethics

John Gaskins
Marketing and Retail
Geographic Information Systems

Ephrem Eyob
Resource Planning
Reverse Logistics

Coray Davis
Transportation Systems
Geographic Information Systems

Amir Javaheri
Resource Optimization
Game Theory

Oliver Hill
Human Behavior
Health Outcomes
Research Agenda

- Dependable Logistics Systems
  - Performance
  - Reliability
  - Safety
  - Maintainability
  - Security
  - Risk Mitigation

- Global Economics
  - Cost
  - Public Policy
  - Complexity
  - Transportation
  - Currency Exchange Rates
  - Human Factors

- Global Supply Chain Infrastructure
  - Security
  - Public Policy
  - Disruption
  - Redundancy

- Modeling and Simulation
  - Model Development
  - Model Validation
  - Frameworks
  - Human Interactions
  - Basic Principles
  - Technology Formulation
  - Proof of Concept
  - System Validation

Industry/University Collaboration Provides a Broad Base of VLRC Capabilities
Governance

- Virginia non-stock corporation
- Multiple levels of membership
  - Organizing Industry Members
  - Organizing University Members
  - Tier 1 Industry Members
  - Tier 2 Industry Members
  - Academic and Government Partners
- Board of Directors
  - Establishes all policies
  - Approves budgets
  - One member from each Organizing Member
  - Chair of Industrial Operations Board is a member
- Industrial Operations Board
  - Provides oversight of day-to-day operations
  - One member from each Organizing Member
  - One member from each Tier 1 Member
  - One member elected by Tier 2 Members
- Technical Advisory Board
  - Establishes technology roadmap
  - Creates research agenda
  - One representative from each Member
All Members have non-exclusive, royalty-free license to IP from Generic Research.

Tier 1 Members will own IP generated from the Directed Research that they sponsor.
Open Issues

- **Name**
  - Virginia Logistics Research Center
  - Commonwealth Center for Applied Logistics Systems
  - Others

- **Location**

- **Additional Partners**
  - Academic – VCU, William and Mary, Virginia Tech, others
  - Industry
  - Government

- **Initial Industry Member**

- **Seed and Facility Funding**

- **Leadership**
Work Stream Priorities

- Programs
  - Capabilities
  - Examples
  - Benchmarking
- Member Recruitment
- Funding
  - Members
  - State
- Facilities
  - Location
  - Funding
- Corporate Services
  - Legal
  - Financial
- Human Resources
  - Key Personnel
  - Leadership
Questions and Contacts

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