

Funding and Partnerships

C. Michael Walton, Ph.D., P.E.
The University of Texas at Austin

National Transportation Crisis

- ◆ **Crisis in system performance**
- ◆ **Crisis in funding**
- ◆ **Crisis in policy**

Crisis in Funding

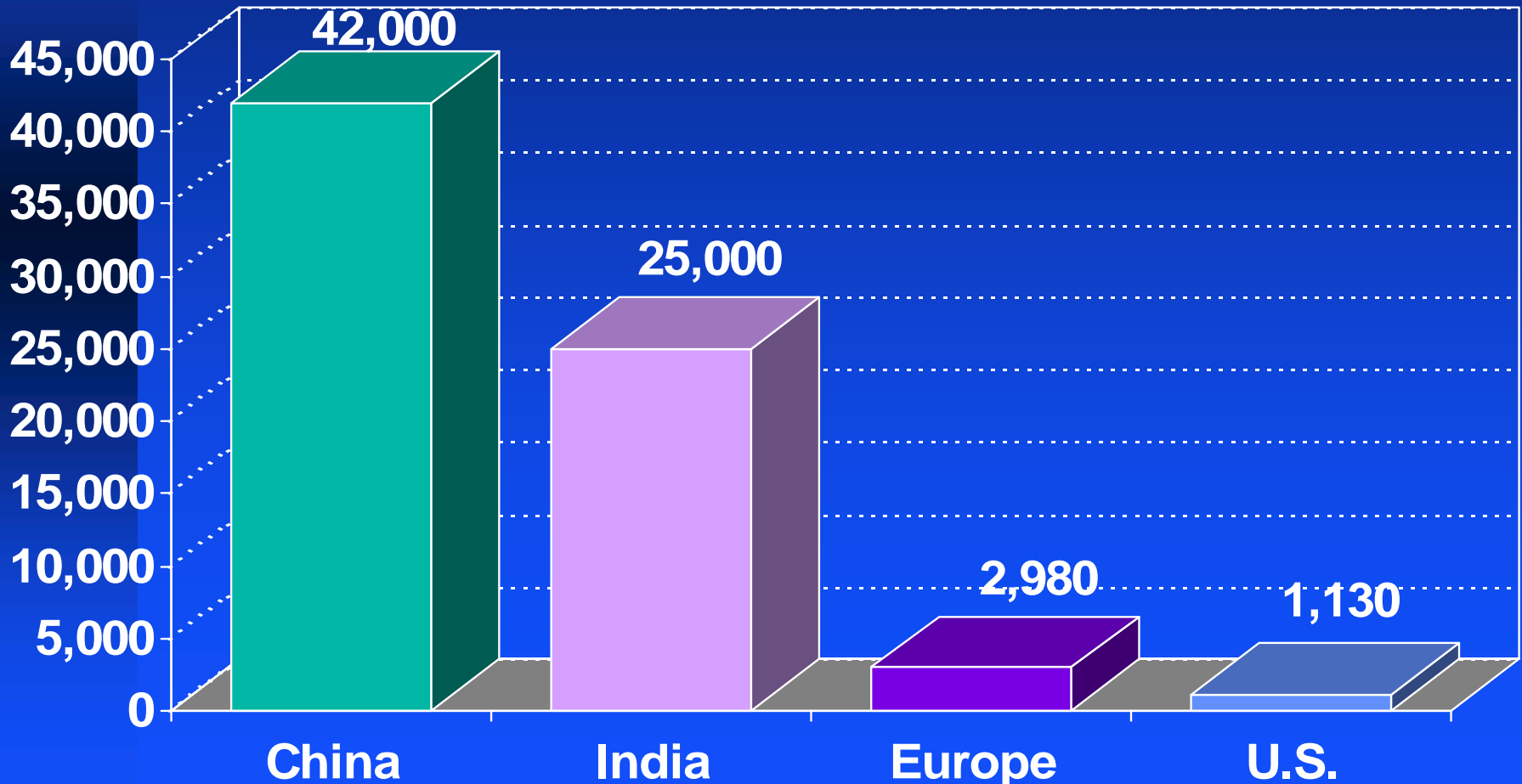
- ◆ **Current system is not keeping up with inflation or needs**
 - Loss of purchasing power
 - Increased construction costs
 - HTF headed into deficit
 - Current revenues cannot sustain current program
 - Political difficulties in raising gas tax
- ◆ **Long term issues regarding viability of gas tax**
- ◆ **Where will additional money come from to meet the enormous transportation needs?**
 - Need increased revenue just to maintain existing funding levels.
 - Need big increase in revenue to meet needs.

Ready to Meet Future Needs?

The federal government finances **almost half** of all U.S. **capital investments** in highway and bridge construction and is a major financier of mass transit and airport projects... BUT

... By any performance metric, the current federal investment in transportation infrastructure is **woefully under funded** to meet current OR future **national** safety, mobility, security and environmental needs... or even maintain current conditions.

Miles of New “Interstate” Quality Highways to Be Constructed, 2000-2020



Source: The World Bank, India's Ministry of Finance, The European Commission, and ARTBA calculations

The Competitive Challenge

CHINA

- ◆ “National Transportation Highway System”: \$150B investment
 - 1989: 168 miles of expressway
 - 2001: 10,000 miles of expressway
 - 2005: 25,480 miles of expressway
- ◆ 12/04 announcement: “7918 Highway Network” expansion to NTHS
 - Goal: 52,000 expressway miles by 2020, connect all cities with population over 200,000
- ◆ China highway investment in 2001: 2.5% of GDP (0.3% average through 1980s)
 - Today: 9% of GDP
- ◆ US highway investment: ~1% of GDP

The Competitive Challenge

INDIA

- ◆ **National Highway Development Project: \$50B investment**
 - Improve 40,000 miles of expressway
 - 1999: Enacted national gas & diesel tax; created Central Road Fund trust fund

EUROPEAN UNION

- ◆ **“30 Priority Axes”**: 2005 European Commission identified 30 critical transnational multi-modal transportation improvement projects
 - \$300B investment from EU and member states
 - More than 1/3 of projects **ALREADY UNDERWAY**
- ◆ **TEN-T Plan**: By 2020 expanding existing road network by 2,976 miles, rail by 7,750 miles + substantial additional highway, rail and inland waterway improvements

The Federal Surface Transportation Program

Meeting national needs means allowing a federal role that uses federal funds collected from the citizenry as necessary to meet national goals and strategic objectives.

The Federal Surface Transportation Program

The Interstate Highway System would never have been built if each state alone had to pay for the segments running through it.

Implementing the IHS “vision” required a 50-state partnership with buy-in to strong federal leadership, coordination and financing.

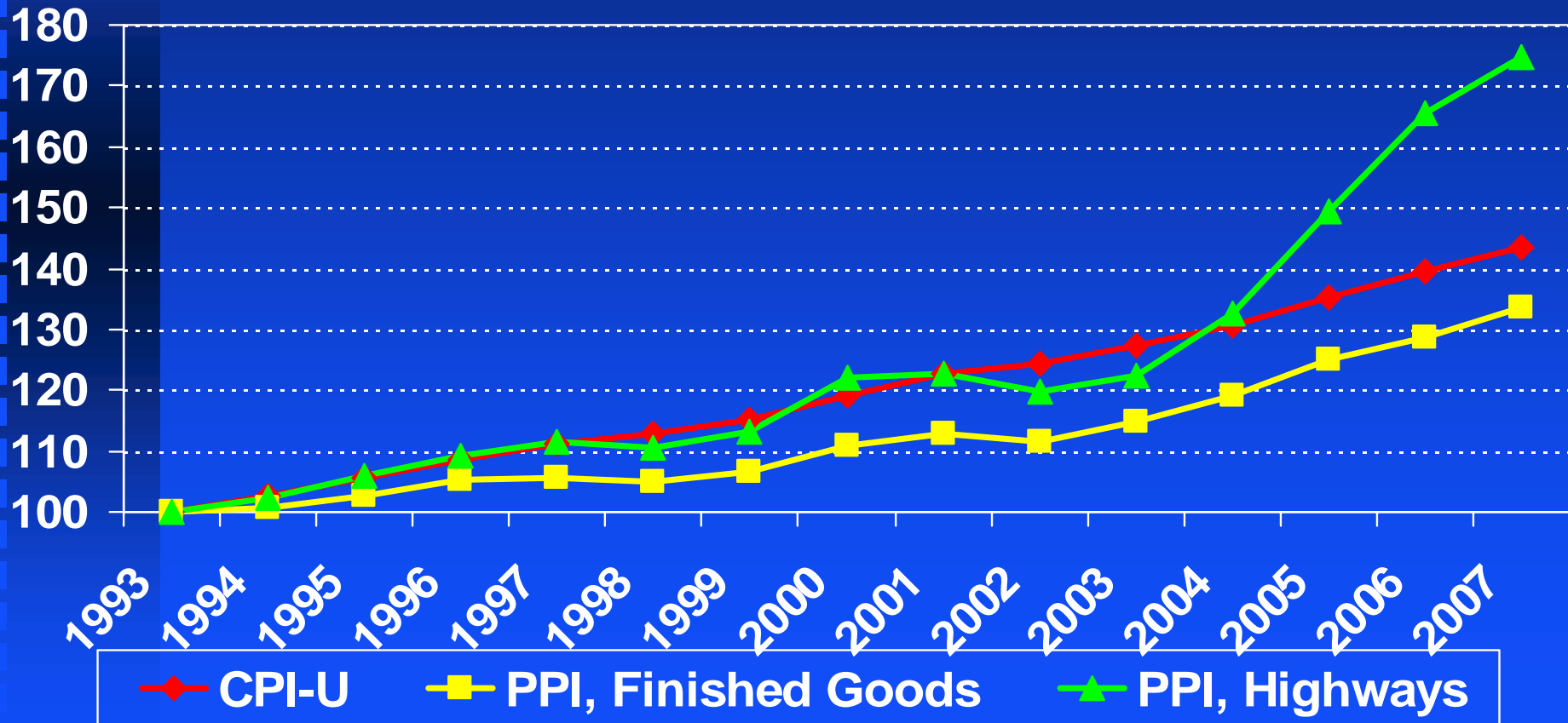
A New Vision

**A Two-pronged Agenda
for 2009 SAFETEA-LU
Reauthorization...**

Economic Impact of Transportation Investment

- ◆ Every \$1 billion of federal highway investment supports 35,000 jobs (FHWA)
- ◆ Highway contractors buy/lease \$460,000 of equipment annually each location vs. \$18,000 each homebuilder location (Census)
- ◆ \$1 of infrastructure investment yields \$1.80 of GDP vs. \$1.00 for unemployment benefits and \$.70 for tax cuts (Standard & Poors)

After Decade of Modest Inflation, Highway Construction Costs Have Skyrocketed Since 2003



Part I: Enhanced Core Highway and Transit Investment Programs

- ◆ Meeting Highway and Transit Investment Needs
 - Increase federal motor fuels tax by at least 10¢ / gallon
 - Index tax for inflation
- ◆ Utilize All Revenue Options
 - Direct user fees (e.g., congestion pricing, HOT lanes, truck only lanes)
 - Debt financing
 - PFC for rail similar to air passengers
- ◆ Preparing for the Future
 - Transition to VMT

Part II: A New Vision: The “Critical Commerce Corridors” Program

Authorize a “Critical Commerce Corridors” (3C) Program

- National Priority Program led by federal government to develop system to ensure secure / efficient movement of freight
- Separate user fee financing mechanism, “fire walled” from core HTF and solely dedicated to 3C
- Complements existing “Core” programs

A New Vision: The “Critical Commerce Corridors” Program

What the 3C Might Include...

- ◆ **Most—if not all—of the existing Interstate Highway System and a portion of the non-Interstate National Highway System**
- ◆ **New Multi-Modal Trade Corridors**
- ◆ **New capacity separated “Truck Only” Lanes allowing increased trucking productivity/vehicle mix safety**

A New Vision: The “Critical Commerce Corridors” Program

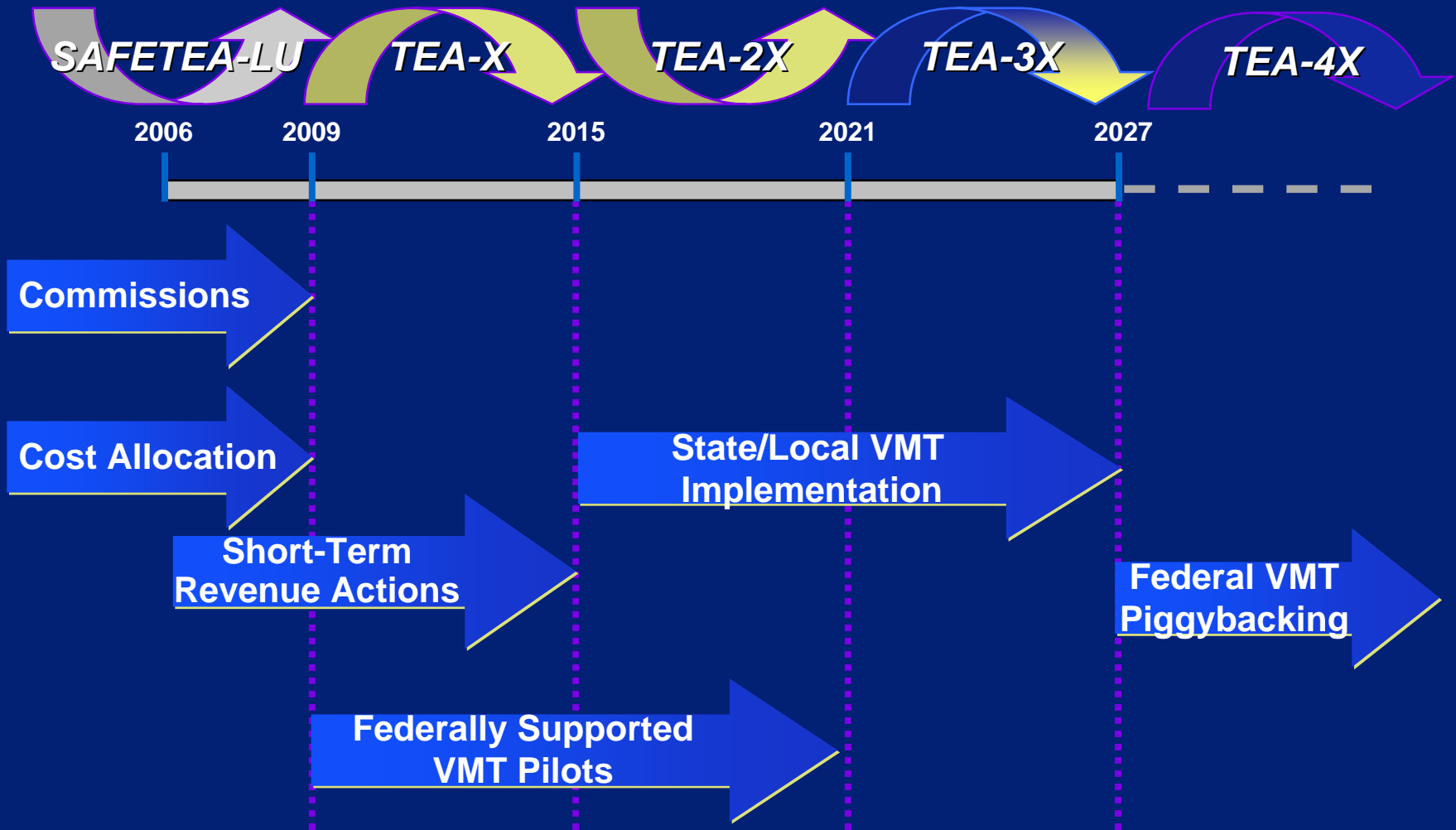
What the 3C Might Include...

- ◆ “Last mile” military base, port, airport, inland waterway and rail connections
- ◆ Tunneling and elevated road and rail ways on existing right-of-way
- ◆ International Gateways
- ◆ Multi-Modal freight transfer centers
- ◆ Integrated telecommunications corridors

Benefits of a Mileage-Based Revenue System

- ◆ All users pay fair share
- ◆ Revenue **keeps pace** with population and economic growth
- ◆ Alternative fuels and engines do not erode revenues
- ◆ Separates fuel use from highway user fees and **remove conflict** with energy and air quality policies
- ◆ Builds on **emerging electronic tolling and pricing** applications in U.S. and Europe
- ◆ Federal leadership will ensure **interoperability**

Timeframe for Transition



Prospects for the Future

- ◆ Investment in all infrastructure areas is critical to the future of the U.S.
- ◆ Case will not be made on engineering criteria / studies
- ◆ Broader implications and economics are key (i.e., the business case)
- ◆ Stakeholders and the business community must be educated and involved
- ◆ Evaluation of system performance versus funding scenarios may help
- ◆ New financing mechanisms may be needed



C. Michael Walton, Ph.D., P.E.
Ernest H. Cockrell Centennial Chair in Engineering
Dept. of Civil, Architectural and Environmental Engineering
The University of Texas at Austin
1 University Station C1761
Austin, TX 78712
512-471-1414
cmwalton@mail.utexas.edu
