

NORTH AMERICA TOLL INTEROPERABILITY



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A Growing Industry

Tolling Statistics

- **Over 100 North American toll authorities in 35 States**
- **Several new authorities being planned**
- **More than *\$10 Billion* collected annually in North America**
 - \$7.3 Billion collected by the E-ZPass Group (Northeast)
 - \$1 Billion collected by Florida Turnpikes
 - \$1 Billion collected by Texas Turnpikes



From Stop & Go to Free Flow

Tolling Evolution

- **A memory of the past (1980'S)**
 - Toll booths (cash collection with gate arms)
 - The ultimate interoperability scheme



- **Harnessing RFID technology (1990'S)**
 - Open Road Tolling (ORT)
 - Toll booths with separated highway speed toll collection



From Stop & Go to Free Flow

Tolling Evolution

- **Positioning for the future (Now!)**
 - All Electronic Tolling (AET)
 - Highway speed tolls...no roadside cash collection
 - Use multi-protocol reader to read different transponders
 - Uses video for billing and violation enforcement
 - Provides backbone for other pay-as-you go applications, e.g. VMT



Multi-Protocol Technology

New and Improved Business Model

- **Multi-protocol readers can read different transponders (RFID) at highway speeds**
 - Several agencies are installing multi-protocol readers
 - Creating new business agreements with multiple agencies
- **Does not require changing RFID technology**



Video Tolling

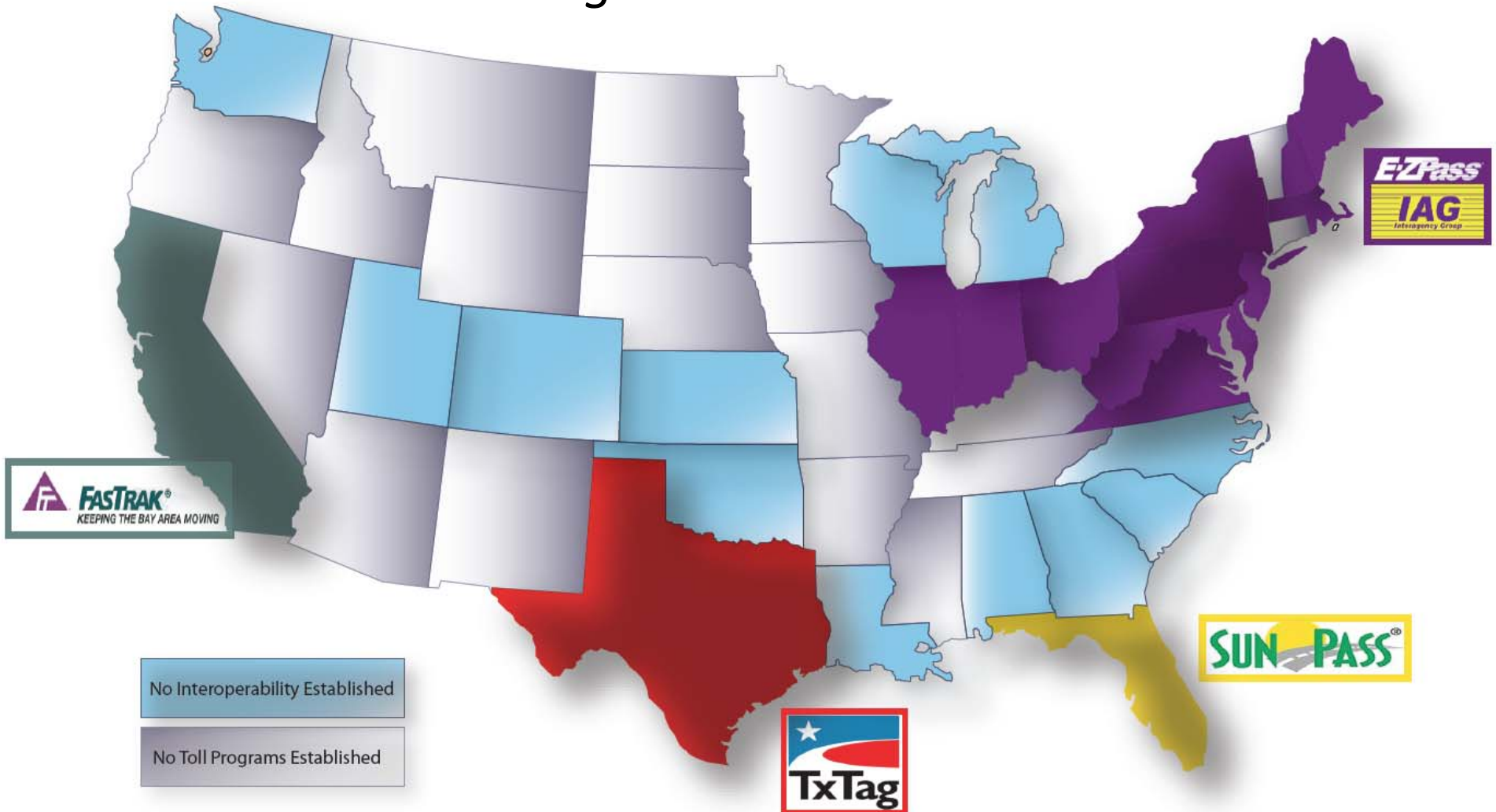
New and Improved Business Model

- **Video tolling is key to interoperability**
 - Bill from license plate image
 - Bill users without transponders
 - Can eliminate cash collection
 - Augments incompatible electronic devices
 - Once a violator, now a customer
 - Increased reliance on accurate MVA databases
 - Cash customers still have option to pay cash



Current US Interoperability

Regional Networks



Transponders Deployed

Regional Networks

- **Cost of converting to a single technology is enormous**
 - Over 50 million customers use transponders
 - \$500 million for transponder replacement
 - Cost of changing roadside and back office systems
 - Estimated \$2 billion or more



Interoperability

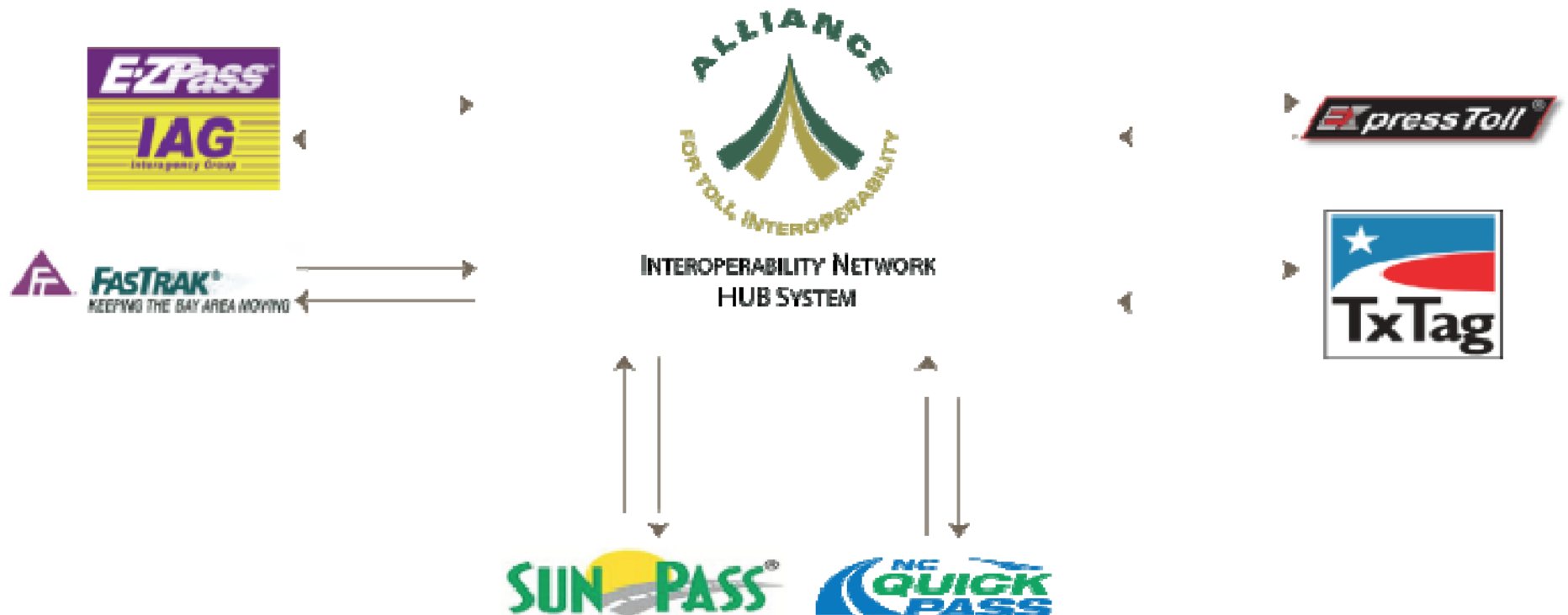
The Common Denominator

- **Solution without adapting to one technology**
 - Provides reliable vehicle identification by combining transponders, multi-protocol readers and video
- **Next Step: Provide a system for information exchange**



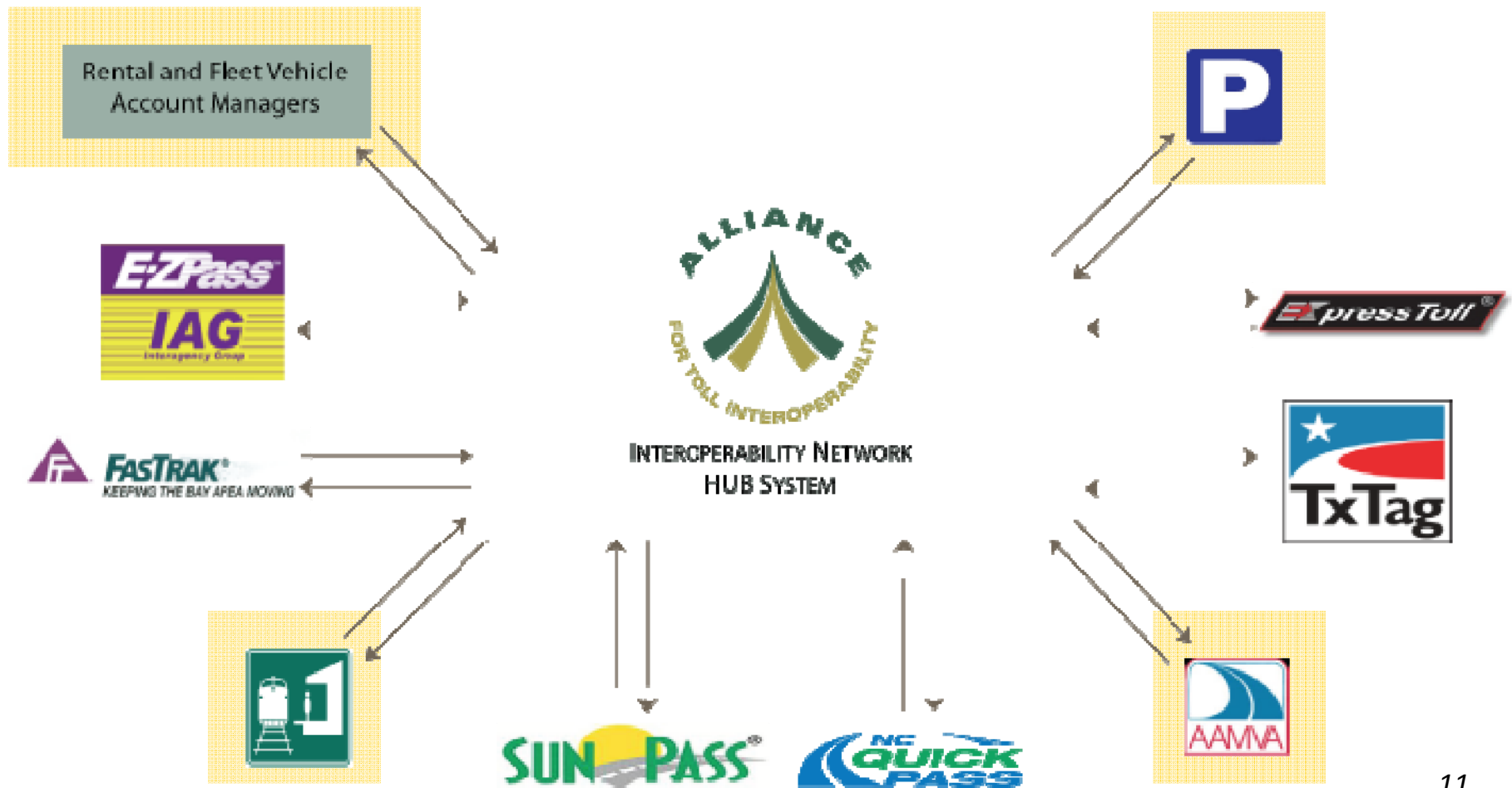
Interoperability HUB

- Use shared customer data for billing outside “home territory”



Interoperability HUB

- Ability to expand to other services:



Implementation

- **February 2011**
 - Issuing RFP for license plate interoperability hub
 - Pilot Program beginning mid-2011
- **Implement:**
 - 1st: License plate data exchange
 - 2nd: RFID information exchange



License Plates Databases

Solutions in the Making

- **Toll industry needs**

- Need access to license plate registration information
- Continue coordination with American Association of Motor Vehicles (AAMVA) and local MVAs





QUESTIONS?