



# Metrics for Future Technology Performance: Impacts on Interoperability

**Suzanne Murtha**

Business Development Executive  
TÜV Rheinland, Washington, DC



## European Electronic Toll Service

- Vision: 1 OBU, 1 contract, 1 invoice
- EU law in force since 2004 / 2009
- Obliging Member States to enable market of cross-border payment service providers (“EETS Providers”)
- Obliging toll road operators (“Toll Chargers”) to accept EETS
- Deadlines: Oct 2012 trucks, Oct 2014 all vehicles

## North American Interoperability

- Vision: Don't let Mica impose a requirement for interoperability before we figure out how to make it work
- Alliance for Toll Interoperability work





## Interoperability:

### “Either You Have it or You Don’t”

How do we know if we do?

- Is it if a reader can read more than one tag?
- Can a tag work on more than one reader?
- Can a camera catch all the tags that don't fit in the above category?
- How do we measure for success rates payment service providers?
- What is the cost of each of those different types of interoperability?  
And therefore....
- How do we measure profitability and the value of the interoperability?  
How do rating agencies know how to gauge performance? And  
therefore...
- How do we measure performance and if a system is truly  
interoperable?



## For Example

- An operator records most of the reads from a new multi-protocol reader, the camera picks up the remainder...is that interoperability?
- Title 21 – most of the tags/readers in California work together because they're made by the same two manufacturers, but there is no consensus on whether they're all Title 21 compliant...is that interoperability?
- An investor wants to invest in a tolling based PPP. They're told by integrators that there can be an interoperable system, but it will include ALRP – how do we measure that profit and give a reasonable case for investment versus other possible investment opportunities?



# Standards for Performance Metrics for Interoperability

- Performance metrics are also like to be a part of the next surface transportation bill
- These are something transportation industry will be required to develop
- TÜV would like to propose that, through IBTTA, the industry begin an interoperability standards metrics performance group to create measurement criteria for interoperability



## Possible Metrics for Discussion

- Read rates for each type of tag
- Usage rates for camera reads as backup
- Success rates for readers
- Profitability metrics that allow comparability across agencies/regions
- Profitability metrics that encourage investments in transportation
- Success metrics which prove interoperability to Congress





## Suzanne J. Murtha

Business Development Executive,

North America ITS

TUV Rheinland NA

Telephone: 202-689-4802

E-Mail: [smurtha@us.tuv.com](mailto:smurtha@us.tuv.com)

