The Toll Industry of the Future: Looking Ahead to 2030

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Senior Vice President
Looking Ahead to 2030

• Major Growth Coming in US Tolling
  – New toll roads
  – Express lane networks
  – Widespread interstate tolling

• By 2030, Measured by Toll Mileage, the Industry May Be 4-5 Times Bigger Than Today
  – How will the shape of our industry change
  – How might it impact IBTTA

• An “Unscientific” But Realistic Gaze at the Future
  – Just one man’s opinion
Limiting Conditions

• As a Traffic and Revenue Consultant, There Must Always Be “Limiting” Conditions and Disclaimers
• This View Is Focused Only On the US Toll Market
  – We will see growth in other countries as well
• This Is Pure Speculation, Based On a Look Into a Clear Crystal Ball
  – Our traffic and revenue forecasts do NOT use crystal balls, contrary to some people’s opinion
• There Are No Guarantees, But It’s a Reasonably Likely Outlook
  – I will be retired before we reach the first benchmark of 2020, so who cares
• If I’m Even Close… the Amount of Change and Growth Will Be Huge
  – And the opportunities almost limitless
The Primary Drivers of Tolling Growth

• Many States Have Identified New Projects With No Source Of Funding
  – New or extended roads
  – New or reconstructed bridges and tunnels

• Explosive Growth in Express Toll Lanes
  – Dozens of new projects
  – ETL networks in major urban areas
  – State mandates to “toll new capacity”

• Tolling Of Our Existing Interstates
  – It is coming (no other viable options)
  – It will dwarf everything else when it does
States with Potential New Toll Roads or Extensions
States with Potential New or Reconstructed Toll Bridges or Tunnels
States with Potential New Tolled Managed Lanes
Fertile Ground for New Tolling Initiatives

Potential Toll Roads and Bridges
Potential Toll Roads and Express Lanes
Potential Toll Bridges and Express Lanes
Potential New Projects: All 3 Types
Express Lanes - Near Term Growth Focus

• About 100 Miles Or So of Express Lanes Today
• Another 500 Miles On the Drawing Board Today
• Regional ETL Networks are the New Rage
  – Could add 1500 more miles of ETL’s by 2025
Potential Express Lane Networks

By 2020

By 2025
Tolling the Interstates
The “Ultimate” Growth Driver

- The Interstate System Is Our Most Important National Transportation Asset
  - Conceived and funded by the Federal government
  - But it owns none of it
  - And its over 50 years old and falling apart

- There Are Few Other Options
  - States face $2 trillion cost to rebuild and maintain over the next 50 years

- The Armor is Cracking
  - USDOT proposal to allow unrestricted tolling for reconstruction
  - Arguments against tolling wearing thin

- The Long Term Outlook
  - Number of reconstruction pilots will be increased with May, 2015 bill
  - Prohibition will be essentially eliminated by 2021 re-authorization
The Interstate Tolling Era

• Nearly Half Of All States Will Choose To Add Tolls by 2030
  – Accelerates after 2020
  – All- electronic only
  – Really need true nationwide interoperability

• Huge New Opportunity For P3 Concessions
  – To expand, rebuild, reconstruct and maintain interstate routes over long term concession period
  – Most likely thru availability payments so states maintain control of toll rates and policies

• Huge Increase In Proportion Of American Cars and Trucks Equipped For Electronic Tolling
## Potential Interstate Route Toll Conversions

<table>
<thead>
<tr>
<th>Time Period</th>
<th>Low Scenario</th>
<th></th>
<th>High Scenario</th>
<th></th>
<th>Mid-Point</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Number Of States</td>
<td>Miles of Interstate</td>
<td>Number Of States</td>
<td>Miles of Interstate</td>
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</tr>
<tr>
<td>2015-2020</td>
<td>2</td>
<td>2,000</td>
<td>4</td>
<td>3,000</td>
<td>2,500</td>
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<tr>
<td>2020-2025</td>
<td>5</td>
<td>4,000</td>
<td>8</td>
<td>6,400</td>
<td>5,200</td>
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<tr>
<td>2025-2030</td>
<td>10</td>
<td>8,000</td>
<td>15</td>
<td>12,000</td>
<td>10,000</td>
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<tr>
<td>15-Year Totals</td>
<td>17</td>
<td>14,000</td>
<td>27</td>
<td>21,400</td>
<td>17,700</td>
</tr>
</tbody>
</table>
Sizing Up the Industry

• In The Near Term (2015-2020) Look For Express Lanes to Lead the Way
  – Several new toll roads, mostly in high growth urban regions
  – Only a few “pilot” Interstate conversions

• In the Medium Term (2020-2025) Most States Start Looking Hard at Interstate Tolling
  – Congress opens the door in 2021
  – Express Lane networks continue

• In the Longer Term (2025-2030) Look For a Big Increase In Interstate Tolling
  – Also early planning for shift to “per mile” road user charging which will ultimately reshape tolling technology
## Potential Increase in Toll Road Miles

### Table: Projected Increases by 5-Year Increment

<table>
<thead>
<tr>
<th>Toll Road Category</th>
<th>Approx. 2014</th>
<th>2015-2020</th>
<th>2020-2025</th>
<th>2025-2030</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traditional Toll Roads</td>
<td>5,400</td>
<td>300</td>
<td>200</td>
<td>100</td>
<td>6,000</td>
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<tr>
<td>Express Toll Lanes</td>
<td>100</td>
<td>800</td>
<td>400</td>
<td>300</td>
<td>1,600</td>
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<tr>
<td>Interstate Conversions</td>
<td>-</td>
<td>2,500</td>
<td>5,200</td>
<td>10,000</td>
<td>17,700</td>
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<tr>
<td>Incremental Miles</td>
<td>-</td>
<td>3,600</td>
<td>5,800</td>
<td>10,400</td>
<td>-</td>
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<tr>
<td>Cumulative Miles</td>
<td>5,500</td>
<td>9,100</td>
<td>14,900</td>
<td>25,300</td>
<td>25,300</td>
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<tr>
<td>Percent Increase Over 2014</td>
<td>-</td>
<td>65.5%</td>
<td>170.9%</td>
<td>360.0%</td>
<td>-</td>
</tr>
</tbody>
</table>
Growth in Toll Road Mileage

- **0** to **5,000**
- **5,000** to **10,000**
- **10,000** to **15,000**
- **15,000** to **20,000**
- **20,000** to **25,000**
- **25,000** to **30,000**

**Years:** 2014, 2020, 2025, 2030

- **Traditional Toll Roads**
- **Express Toll Lanes**
- **Interstate Conversions**

**IBTTA Austin 2014**
Comparison of Toll Roads by Category
2014 vs. 2030

**2014**
- Traditional Toll Roads: 98.2%
- Express Toll Lanes: 1.8%

**2030**
- Traditional Toll Roads: 70.0%
- Express Toll Lanes: 6.3%
- Interstate Conversions: 23.7%
Potential Growth in Toll Equipped Vehicles

**Number of Vehicles**

- Traditional Toll Roads
- Express Toll Lanes
- Interstate Conversions

**Percent of US Fleet**

- 2014: 15%
- 2020: 25%
- 2025: 40%
- 2030: 50%
## Changing IBTTA Membership Profile
### By Major Category

<table>
<thead>
<tr>
<th>Type of Organization</th>
<th>Approximate Current Members</th>
<th>Added in Next 15 Years (US)</th>
<th>Projected 2030 (US)</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>U.S.</td>
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<tr>
<td>Toll Agencies</td>
<td>45</td>
<td>39</td>
<td>11</td>
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<tr>
<td>State DOT's</td>
<td>19</td>
<td>13</td>
<td>18</td>
</tr>
<tr>
<td>MPO's</td>
<td>5</td>
<td>5</td>
<td>20</td>
</tr>
<tr>
<td>Concessionaires</td>
<td>16</td>
<td>5</td>
<td>15</td>
</tr>
<tr>
<td>Consultants / Vendors</td>
<td>107</td>
<td>94</td>
<td>36</td>
</tr>
<tr>
<td>Totals</td>
<td>192</td>
<td>156</td>
<td>100</td>
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</tbody>
</table>
A Comparison of IBTTA Membership
2014 and 2030

<table>
<thead>
<tr>
<th></th>
<th>2014</th>
<th></th>
<th>2030</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Consultants/Vendors</td>
<td>60.3%</td>
<td>50.8%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Toll Agencies</td>
<td>25.0%</td>
<td>7.8%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>State DOT’s</td>
<td>8.3%</td>
<td>9.8%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MPO’s</td>
<td>3.2%</td>
<td>12.1%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Concessionaires</td>
<td>3.2%</td>
<td>19.5%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Pie charts show the percentage distribution of IBTTA membership for 2014 and 2030.
In Summary, by 2030 We May See

- A Much Larger and Very Different Toll Industry
  - Many new players including more State DOT’s, MPO’s and private operators
- Over 25,000 Miles Of US Toll Roads
- Over 1,500 Miles Of Express Toll Lanes
- 50-100 More Toll Bridges/Tunnels (Mostly Reconstructed)
- Over 125 Million Vehicles Signed Up For Electronic Tolls
- At Least $60-$75 Billion In Annual Toll Revenue Collections
- Will We Adapt and Be Ready??
Thank You

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