Key Performance Indicators as an evaluation tool for Tollway Operations

Bill M. Halkias, PE, F. ASCE, F. ITE
President, HELLASTRON - Hellenic Association of Toll Road Network
1st Vice President, ASECAP - Association Européenne des Concessionnaires d’Autoroutes et d’Ouvrages à Péage
Managing Director & CEO, Attikes Diadromes S.A. - Attica Tollway Operations Authority
Measuring and Monitoring: a key factor for Business Excellence

“to measure is to know – if you cannot measure it, you cannot improve it”
– Lord Kelvin

(1883)

BUT…What to measure and how to use these measurements?
Integrate measurements to “KPIs”

KPI’s, a way of measuring how well a company, or a business unit or an individual is performing compared to:

....the industry and to strategic goals and objectives!
Key Performance Indicators characteristics

- Published
- Dynamic
- Regularly
- Cascading
- Simple
- Measurable
- Transparent
- Verifiable
I used a Russian proverb. I'm not a linguist, but I did learn this and have used it several times in his presence. If I'm pronouncing it correctly, it is “doveryai, no proveryai”. It means, “trust but verify”. And I think that's the policy that has to be followed. I have cited DEMOSTHENES, who a thousand years or two back in the Athenian marketplace said: “What sane man would let another man's words rather than his deeds tell him who is at peace and who is at war with him?”

(Interview With Alastair Burnet of ITN Television of the United Kingdom March 10, 1988 about Gorbachev—Source: THE RONALD REAGAN PRESIDENTIAL LIBRARY)
KPI’s as a communication tool…

Each KPI has its own “audience”

- Staff
- Management
- Customers
- State
- Society
- Associations
- Media
- Organizations
- Etc..

But all have the same objective....

To communicate how the operator is performing and what can be done to make operations more effective and valuable for each one of the stakeholders!
Let’s talk about HELLASTRON

CREATING A NATIONAL NETWORK

Necessary condition:
Integrated network management aiming to provide high level of services, integration of procedures and road safety improvements.

Implementation:
Construction, operation & maintenance, financing through concession contracts and tolling.
Creating the Greek National Tollway Network

Attiki Odos
Rio – Antirio Bridge
Egnatia Odos
Nea Odos

Moreas
Aegean Motorway
Olympia Odos
Kentriki Odos
<table>
<thead>
<tr>
<th>Description</th>
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<tbody>
<tr>
<td>Total Network Length in Operation (km)</td>
<td>Average Daily Traffic LV</td>
<td>Number of rest areas</td>
</tr>
<tr>
<td>Total Staff O&amp;M</td>
<td>Average Daily Traffic HV</td>
<td>Number of restaurants</td>
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<tr>
<td>Total Number of ETC Tags</td>
<td>Total Average Daily Traffic LV</td>
<td>Number of hotels</td>
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<tr>
<td>Number of Toll Transactions (in millions) LV</td>
<td>Number of Accidents with injuries</td>
<td>No. of tunnels (tubes) more than 500 m</td>
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<tr>
<td>Number of Toll Transactions (in millions) HV</td>
<td>Number of Fatal Accidents</td>
<td></td>
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<tr>
<td>Total Number of Toll Transactions</td>
<td>Number of Injured persons</td>
<td></td>
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<tr>
<td>Number of ETC toll transactions</td>
<td>Number of Fatalities</td>
<td></td>
</tr>
<tr>
<td>Number of ETC toll transactions LV</td>
<td>Number of property damage only accidents</td>
<td></td>
</tr>
<tr>
<td>Number of ETC toll transactions HV</td>
<td>Number of service areas (equipped with petrol stations)</td>
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Monitoring HELLASTRON’s Objectives & Goals

Operators have to answer the following questions in order to make the right decisions:

1. Why have the numbers decreased or increased?
2. Can I do something to change these numbers?
3. What actions should be taken to change these numbers?
4. How I can evaluate the results of the actions taken?
5. How these numbers monitor our performance?
Monitoring HELLASTRON Objectives & Goals

Key Performance Indicators help significantly to answer all these questions.

HELLASTRON and its members design their own KPI’s for measuring how well the network operators are performing.
Indicative Attica Tollway KPI’s

**Tolls**
- Toll lane processing capacity
- Toll collection cash discrepancy
- Counterfeit or worn banknotes/coins
- Non Payment Forms (NPF)
- Manually issued receipts (Toll System Availability)
- ETC volume
- Money deposit of subscription account

**Traffic & Maintenance**
- Response time to incidents (own units)
- Cooperating agencies response time to incidents (third parties)
- Lane closure due to road maintenance (Lanes*km*time)
- Incident clearing time duration
- Accidents-over-incidents
- Congestion (Km*time)
- Perceived safety feeling (RSS)

**HR**
- Employee turnover
- Employee satisfaction
- Employee presence
- Employee training hours
- Overtime payed
HELLASTRON’s monitoring program is moving towards benchmarking.

**Indicative Key Performance Indicators:**

<table>
<thead>
<tr>
<th>Safety</th>
<th>Operational</th>
<th>Customer Satisfaction</th>
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<tbody>
<tr>
<td>• Fatal Accidents &amp; Fatalities</td>
<td>• Toll collection discrepancy</td>
<td>• Perceived quality of service</td>
</tr>
<tr>
<td>• Accidents with Injuries &amp; Injuries</td>
<td>• Interoperability penetration</td>
<td>• Response time to user complaints and requests</td>
</tr>
<tr>
<td>• Property Damage only Accidents</td>
<td>• ETC Penetration</td>
<td>• Perceived Road Safety</td>
</tr>
</tbody>
</table>

[Image of table with indicators]
Let’s talk about ASECAP

- 22 national association members
- Political paper on the socio-economic role of the industry with well measured parameters
- Permanent Statistics Committee (COPER IV)
- Indication of members’ real situation
- Proof of the road sector importance to the EU world
# ASECAP – Existing Measurements

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<td>Total Toll Revenue</td>
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ASECAP-moving into the future….

- Extending the existing measurements (Safety, Environment, Social Responsibility, Economic Growth, etc.)
- Harmonizing the measurement methods and smoothing of particularities
- Designing of a KPI system to monitor the performance of the European tolling industry
The Global Tolling and Concession Industry should design KPI's for promoting tolling and concessions and measuring how well the network operators are performing.
Thank you for your attention!

Bill M. Halkias, PE, F. ASCE, F. ITE
President, HELLASTRON
bhalkias@hellastron.com, www.hellastron.com
1st Vice President, ASECAP
info@asecap.com, www.asecap.com
Managing Director & CEO, Attikes Diadromes S.A.
bhalkias@attikesdiadromes.gr, www.aodos.gr