Asset Management in Polish Road Administration

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AGENDA

1. Introduction
2. Construction
3. Asset Management:
   • Routine maintenance
   • Rehabilitation
4. Summary
Introduction

GDDKiA manages almost 19,000 km of national roads in Poland.
Introduction

GDDKiA in government’s hierarchy

- Minister of Infrastructure and Development
- General Directorate for National Roads and Motorways
- Construction Department
- Asset Management Department
- Traffic Management Department
- Supporting Departments
- Regionals Divisions of GDDKiA
Introduction

Stakeholders of GDDKiA

Users

Contractors

Government
Construction

GDDKiA has constructed almost 3 100 km highways and expressways in 11 years

2003

2014
GDDKiA has spent 20,2 mln € (26,7 mln USD) for construction.

EU will refund a half of this grand total. The refundation is completed in 85% by now.
Construction - How we manage it?

GDDKiA uses 3 types of contracts:

1. Separate contracts for Design and Construction
2. Design and Build
3. Optimize and Build
Construction’s gaps

How to include LCCA in construction’s tender and chosen technologies?

MAINTENANCE AND REHABILITATION COST

COST

TIME
What is important to manage asset effectively and efficiently?

Road protection (ITS, safety equipment, weight in motion system)

Keep road network in good condition by maintenance.

Rehabilitate asset.
Rehabilitation and maintenance budget spent till 2013

- 2010: 2 342,20 mln PLN (571,27 mln €; 755,5 mln USD)
- 2011: 2 054,64 mln PLN (501,13 mln €; 662,78 mln USD)
- 2012: 2 360,10 mln PLN (575,63 mln €; 761,32 mln USD)
- 2013: 2 390,07 mln PLN (582,94 mln €; 770,99 mln USD)
Routine maintenance
Optimize our operation

INPUT → RESOURCES → OPERATION → OUTPUT → OUTCOME

EFFICIENCY → EFFECTIVENESS → MEASURABLE
New built roads are maintained according to PBC rules, we call it „deliver the outcome”

Now we have almost 1150 km of roads maintained in that type of contracts, by over 20 Contractors.
# Performance indicators

<table>
<thead>
<tr>
<th>TECHNICAL</th>
<th>NON-TECHNICAL</th>
<th>ECONOMICAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rut depth</td>
<td>Output</td>
<td>Financing level</td>
</tr>
<tr>
<td>IRI</td>
<td>Outcome</td>
<td>Realization per cost and period</td>
</tr>
<tr>
<td>Roughness</td>
<td>Goals</td>
<td>Social cost</td>
</tr>
<tr>
<td>Surface condition</td>
<td></td>
<td></td>
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<tr>
<td>Cleanliness</td>
<td></td>
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<td>Dehydration condition</td>
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<td>Illumination</td>
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PBC - gaps

• How to describe the indicators to make them measurable and easy to control?
• When we know these indicators are described correctly?
• Now we maintain new roads in PBC, but how to implicate it on existing roads?
• How to implement the rehabilitation process and all technical indicators in PBC contract and how will we know how much it will cost?
Asset Life Cycle

- Planning
- Rehabilitation
- Data collection
- Database
- Analysis
Surface diagnostic measurement (DSN)

We measure:
Rut depth by RSP (21 lasers)
IRI by RSP (21 lasers)
Roughness by TWO and SRT-3
Deflection by FWD

We want to measure also:
Macrotexture
Surface condition
Pavement Management System - gaps

We are changing our Pavement Management System (PMS) for long-term planning.
Now we use old one which gives us information about surface condition only for one-year planning.
Current approach to PMS

- Safety statistic
- Traffic information
- Surface technical condition
Summary

Polish Road Administration is in progressive time, which gives us opportunity to bring lot of changes, such as:

• construction of new expressways until 2020,
• operations optimization,
• implement new technologies and techniques.

All this to deliver services to the user more efficiently and effectively.

But we also have to fill in gaps and improve processes.
Find out more at www.gddkia.gov.pl

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