



9TH ROAD TECHNICAL COMMITTEE

Road Asset Management System – Slovenia experience

Belgrade, 5 - 7 October 2022



Andrej Zajec
















Agenda:

1. Introduction of DARS d.d.
2. Asset management: Implementation
3. Asset management: Today/Future
4. Reconstruction Works Programme
5. Challenges & Conclusions

DARS d.d. Motorway Company in the Republic of Slovenia

DARS d.d. is the sole motorway Concessionaire, a joint stock company, established in 1994 by law and 100% owned by the Republic of Slovenia.

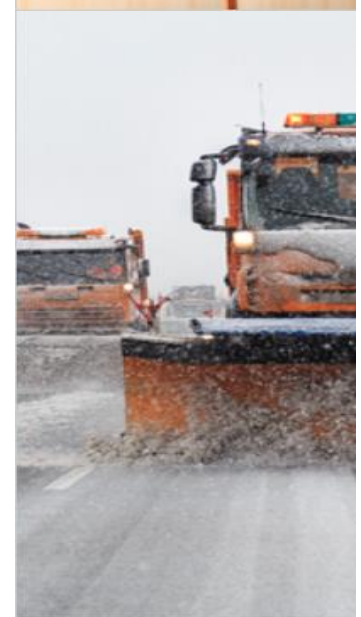


| | | | |
|--|---|---|---|
|  623 km motorways and expressways |  126 access roads |  12 interchanges |  37 km of other roads |
|  330 overpasses |  330 underpasses |  193 viaducts |  228 bridges |
|  13 railway overpasses |  45 tunnels |  35 galleries and cut- and-covers |  5 control centres |
|  67 rest areas |  54 service areas equipped with petrol stations |  27 restaurants |  1.490 truck parking slots |

DARS d.d. Motorway Company in the Republic of Slovenia

OUR MAIN OPERATION:

- Investments and reconstruction
- Road Management
- Maintenance
- Tolling



DARS d.d. Motorway Company in the Republic of Slovenia

Number of employees:

- All together: 1.236
- Road Management: 110

COMPANY ORGANISATION CHART

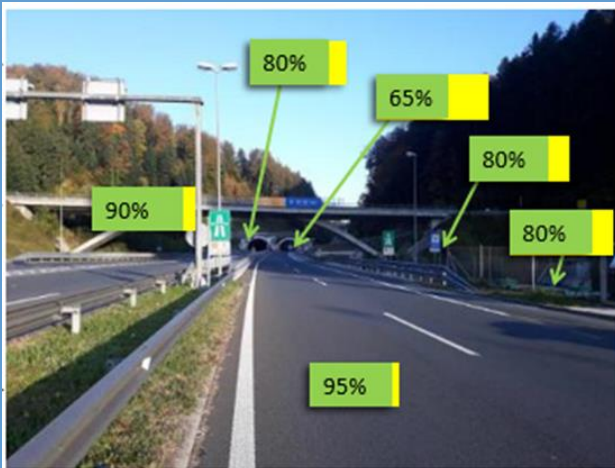


Implementation of Asset Management Systems

- **2002**
 - Pilot Project for PMS
 - Finding most suitable software
- **2004**
 - Implementation of PMS-DARS with dTIMS_CT
 - First results for pavements
- **2006 – 2009**
 - Upgrading of PMS-DARS system for pavements
- **2011 - 2014**
 - Update of PMS-DARS and introduction of a **simplified road management system** in PMS-DARS
- **2015 – 2016**
 - Introduction of long turn planning for **Electro-mechanical equipment in Tunnels** with dTIMS_CT
- **2017 - 2019**
 - Pilot Project for BMS
 - „Reconstruction Works Programme“
- **2019 – 2021**
 - Implementation of BMS-DARS with dTIMS_CT

Asset management DARS d.d.

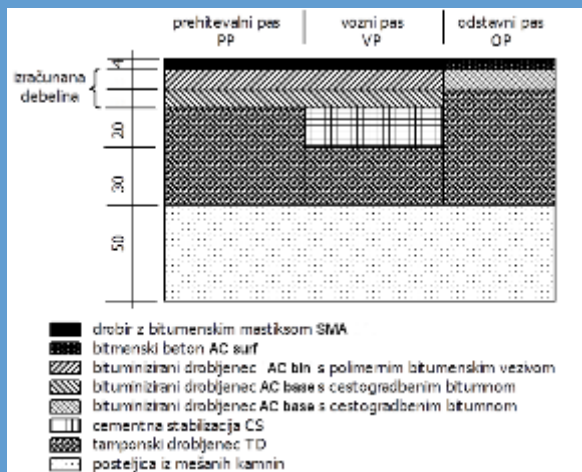
TODAY



- PMS-DARS: Pavement Management System
(operational since 2015)
 - ESO-MS-DARS: Electro-Mechanical Equipment in
Tunnels (operational since 2017)
 - BMS-DARS: Bridge Management System
(operational since 2020)
- RESULT:**
- „Reconstruction Works Programme“
(prepared each year since 2018, for the next three
years)

Assets management DARS d.d.

FUTURE



- PMS-DARS: Pavement Management System
(operational since 2015)

Yearly updates/upgrade?/new system?

- ESO-MS-DARS: Electro-Mechanical Equipment in
Tunnels (operational since 2017)

Yearly updates/upgrade?

- BMS-DARS: Bridge Management System
(operational since 2020)

Yearly updates

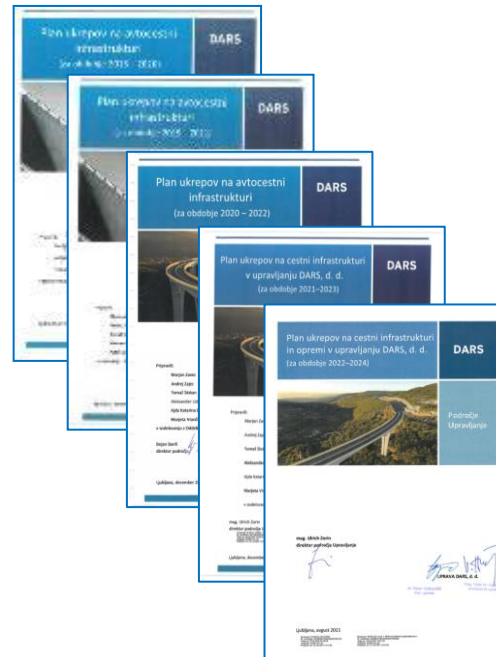
RESULT:

- „Reconstruction Works Programme“
(prepared each year since 2018, for the next three
years)

Incorporation of new assets into the sliding plan

Asset management DARS d.d.

Reconstruction Works Programme



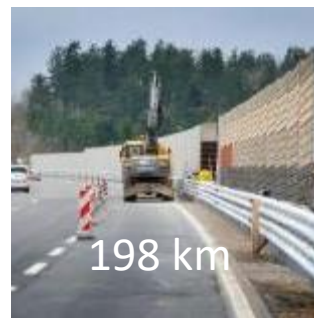
- Pavements
- Bridges
- Tunnels & Geotechnical objects
- Noise protection, controlled drainage retainers and other equipment
- Electro-Mechanical Equipment in Tunnels
- Traffic control and management system
- Traffic equipment
- Rest areas



Over 1.200
Bridges



1.243 lane km
12 junctions
163 km



198 km



23
tunnels
44 km

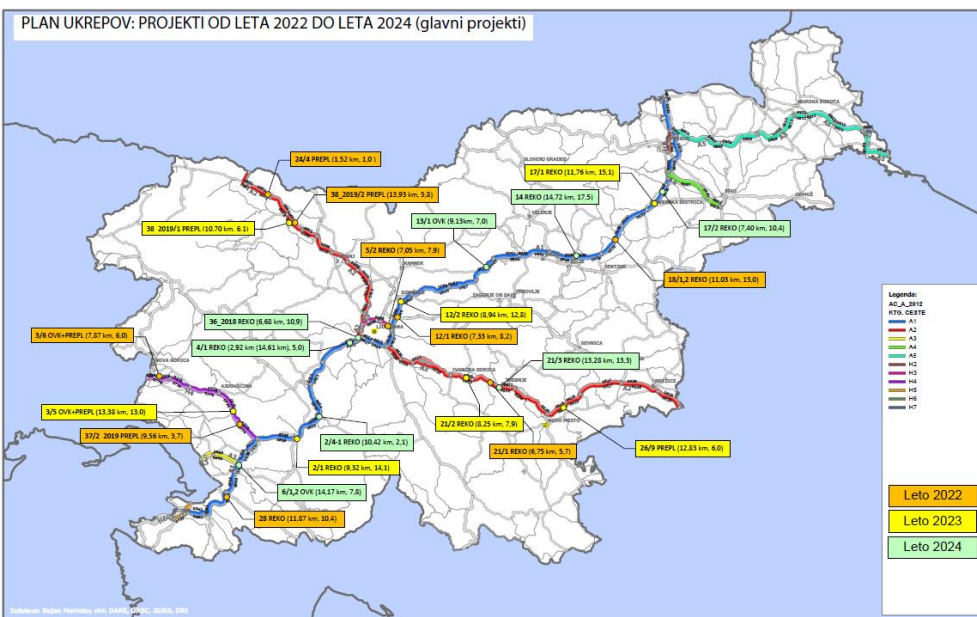
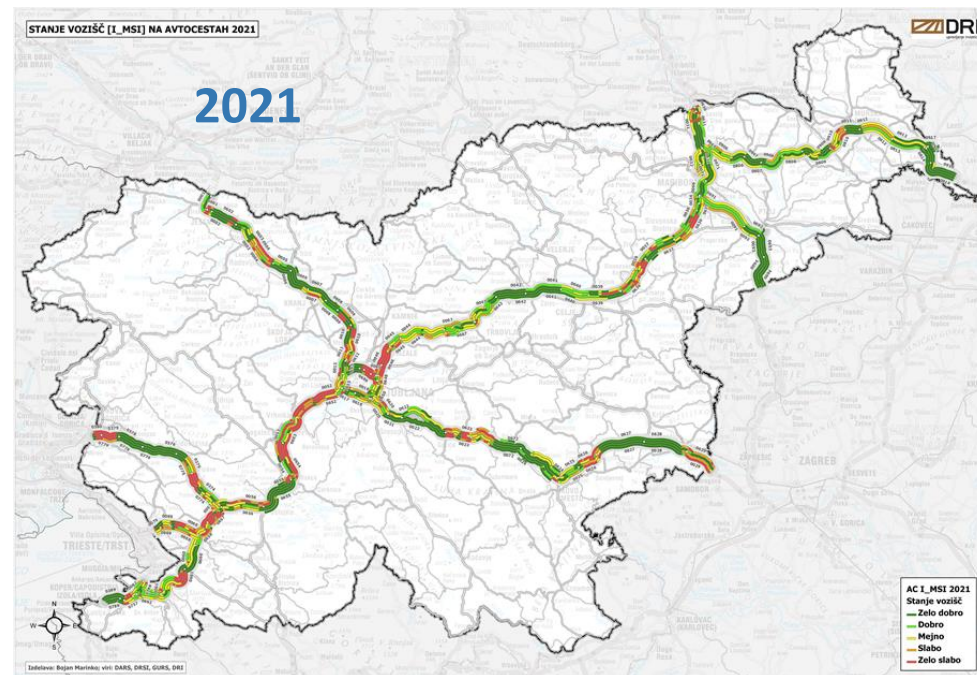


Reconstruction Works Programme



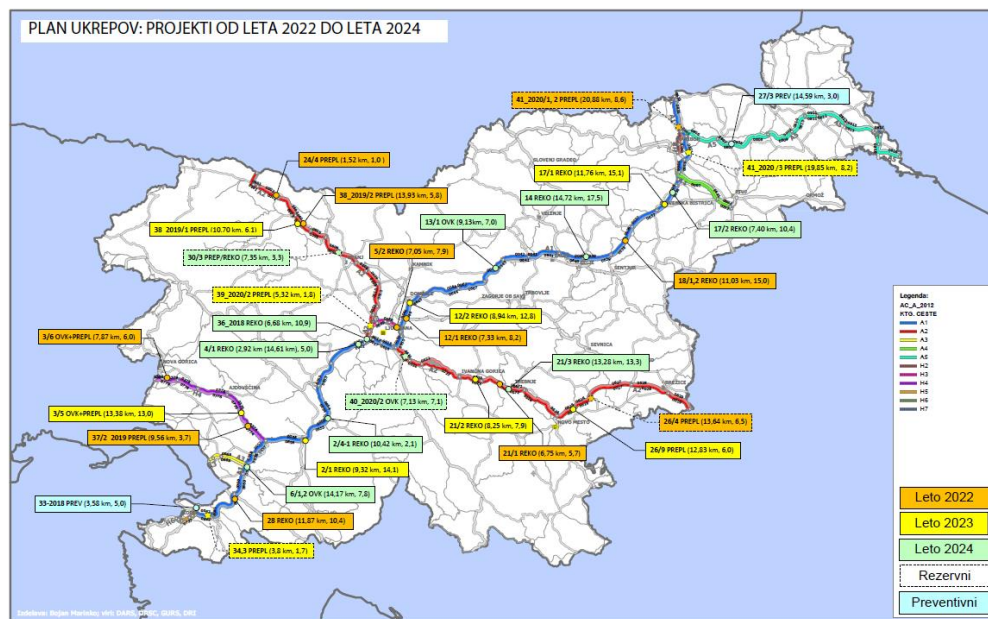
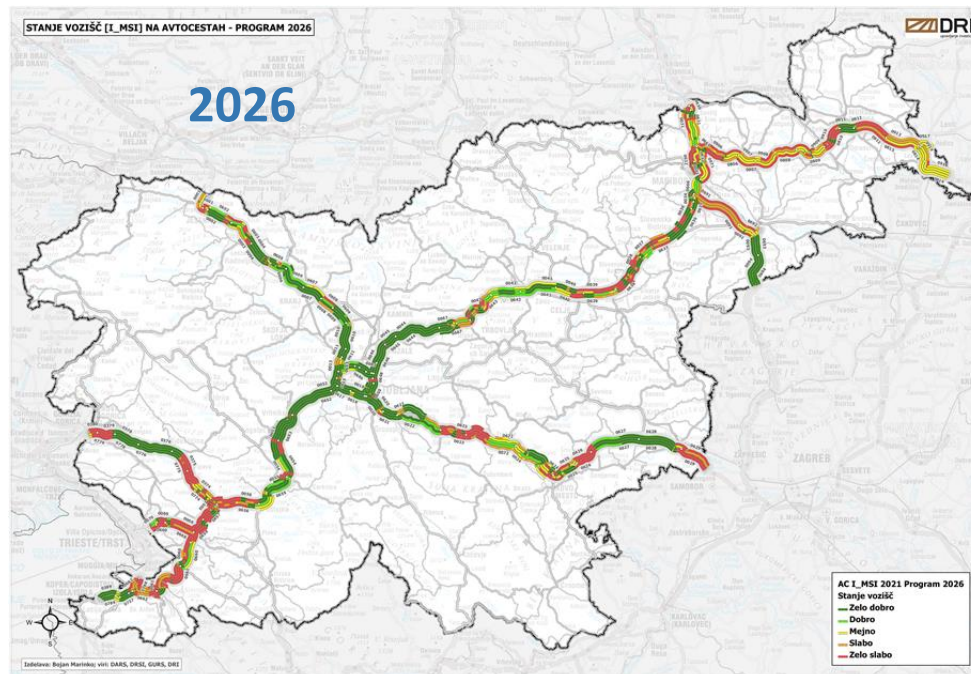
Assets management
DARS d.d.

Reconstruction Works Programme



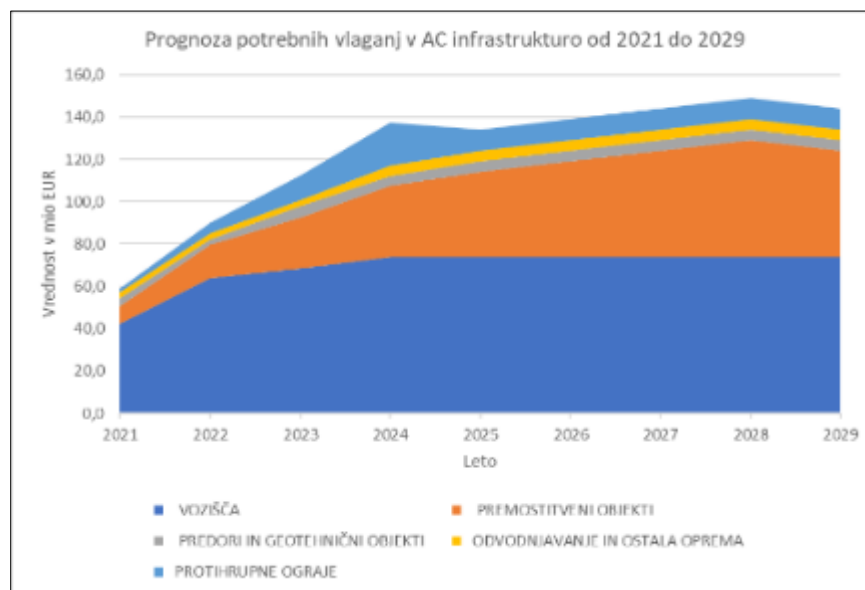
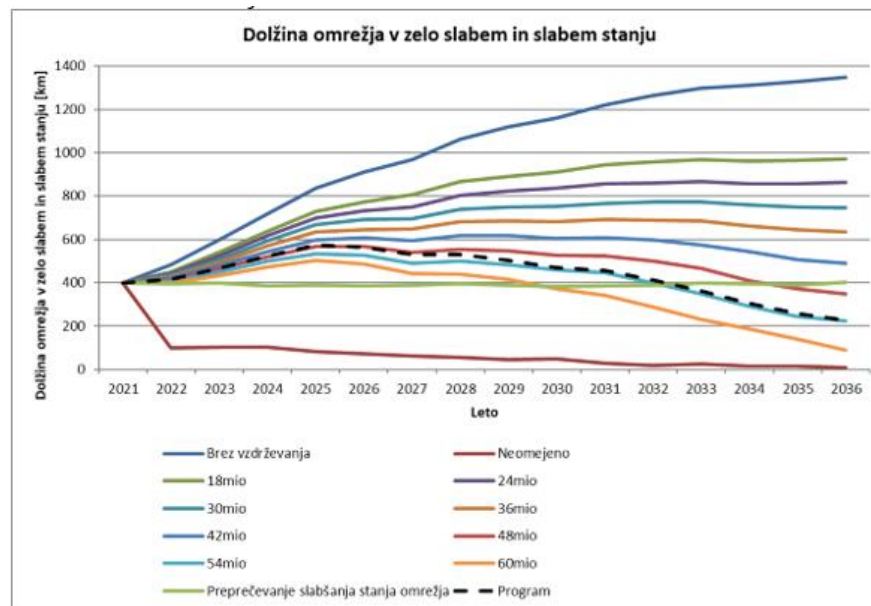
Assets management
DARS d.d.

Reconstruction Works Programme



Assets management DARS d.d.

PMS results



Assets management DARS d.d.

CHALLENGES & CONCLUSIONS

- To make sure that the majority of treatments in the Reconstruction Works programme are carried out within the time and cost limits
- To keep the network condition at least in the current condition
- To increase the accuracy of the PMS System (many under-designed pavements, low build quality on some sections)
 - Incorporation of deflection data into PMS
 - Simplification of the current PMS System: upgrade/new system?
- Cross Asset analysis of all different Assets
- Implementation of GIS System for Works programme (ArcGIS)



Thank you for your attention.

Andrej Zajec, DARS d.d.

