ASFINAG



2nd MEETING OF ROAD EXECUTIVES NETWORK

28 May 2024

Vienna, Austria

ASFINAG and Asset Management

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AISIFIINIAIG

ASFINAG operates all motorways in Austria





rural areas < 20,000 vehicles/day

urban areas > 200,000 vehicles/day

SCOPE OF ACTIVITIES











HISTORY - FORMATION OF ASFINAG

"Special companies"

As of

1960: Brenner-, Tauern-, Pyhrn Autobahn and Arlbergstraßentunnel

Autobahnen- und Schnellstraßen AG

(ASAG)

Wiener Bundesstraßen Gesellschaft

(WBG)

"ASFINAG old"

1982: Establishment of ASFINAG – initially

exclusively as financing company

1993: Foundation of ÖSAG (Tauern, Pyhrn,

WBG, ASAG) and ASG (Arlberg, Brenner)



HISTORY – EVOLUTION OF ASFINAG

"ASFINAG new"

1997: Usufructus contract → toll sticker

OSAG/ASG taken over by ASFINAG

2004: Introduction of truck toll

2005: Europpass taken over

2006: Termination of service contracts with

federal provinces, roads now operated

directly by ASFINAG

2010: Consolidation of operational service

companies ("SG new")

2011: Evaluation of all projects

2020: Approval of ASFINAG vision 2030



CORPORATE STRUCTURE

REPUBLIC OF AUSTRIA

AISIFIINIAIG

Holding

Josef Fiala

Hartwig Hufnagl









ASFINAG

Bau Management GmbH

Alexander Walcher Andreas Fromm

ASFINAG

Maut Service GmbH

Bernd Datler Claudia Eder

ASFINAG

Service GmbH

Heimo Maier-Farkas Tamara Christ

ASFINAG

Alpenstraßen GmbH

Stefan Siegele

ASFINAG

Commercial Services GmbH

VAO Verkehrsauskunft Österreich Traffic Information Austria

ASFINAG

European Toll Service GmbH



~3,100 Employees

6 Toll stations

31.7 BILLION

km of total traffic per year 2,249

kilometres of road network

42

Motorway operation and maintenance facilities

9

Traffic management centres

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~3,100 Employees

~30Apprentices

~25
Percentage of women

Nationalities

~1,400,000

Investments in training in EUR/year

9 Apprenticeship trades



ASFINAG VISION

"AS A RELIABLE, INNOVATIVE AND SUSTAINABLE MOBILITY PARTNER, WE CONNECT REGIONS AND PEOPLE IN THE HEART OF EUROPE."



ASFINAG MISSION

TOGETHER WITH OUR PARTNERS, WE ENSURE MOBILITY FOR GENERATIONS TO COME. WITH FORWARD-LOOKING, SUSTAINABLE AND INNOVATIVE SOLUTIONS, WE REPRESENT PART OF AUSTRIA'S MAJOR SHIFT IN MOBILITY.

- We invest in the quality of our network, constantly developing it both ecologically and economically with Austria's overall mobility system in mind.
- As a competent road operator, we offer our customers safe and efficient motorways and expressways.
- With our modern toll products & digital information services, we are a customer-oriented service provider.





FUNDING

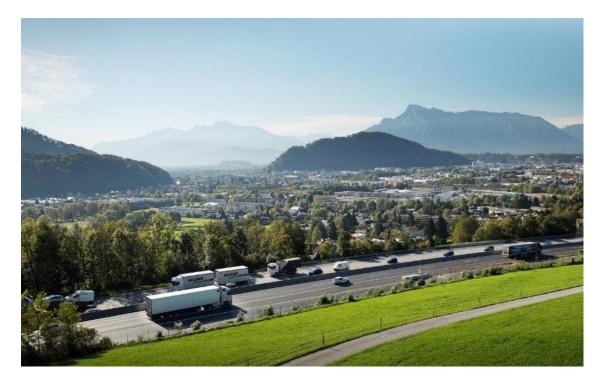
ASFINAG'S FUNDING MODEL

- **ASFINAG** is a prominent and well-established **bond issuer** on the national and international financial markets.
- The bonds come with a guarantee from the Republic of Austria and are rated AA+/Aa1 by rating agencies.
- ◆ Thanks to the government guarantee and this rating, ASFINAG benefits from extremely favourable funding terms.



FUNDING

FINANCING: KEY DATA



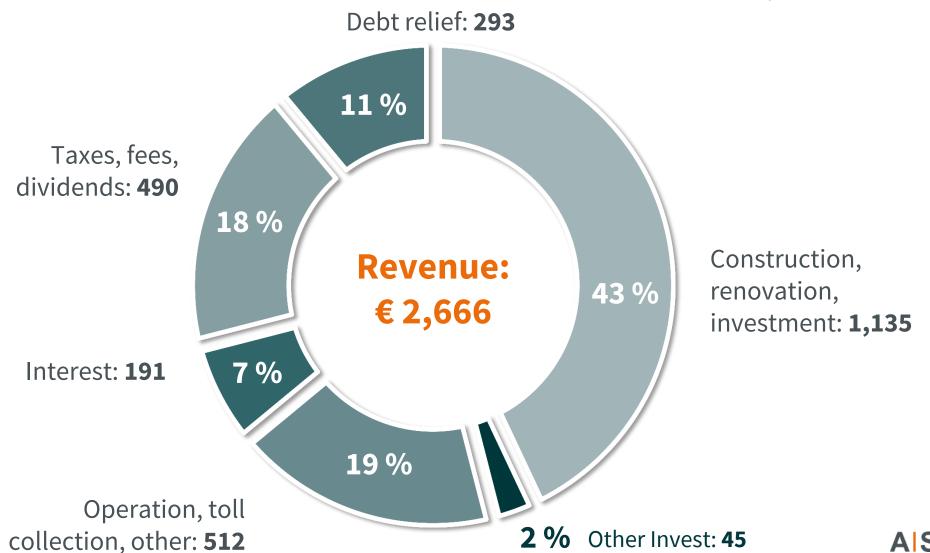
Long-term financial liabilities	8.7 billion euros	
Average nominal interest rate	1.75%	
Interest type	99% fixed / 1% variable	
Average residual maturity	6.6 years	
Currency	EUR	

As of: 30.04.2023

REVENUE 2022

HOW ASFINAG USES ITS REVENUE

(In million Euros)







SERVICE COMPANIES – CORE AREAS



ROUND-THE-CLOCK TRAFFIC OVERVIEW

The employees in the new traffic management centres are on duty 24 hours a day, seven days a week. They monitor all road sections and tunnels and control the traffic flows.



WINTER SERVICE AND PRUNING

The employees make sure that even in adverse weather conditions, the motorways and expressways are kept safe. The inspection and maintenance of trees and bushes is carried out in a sustainable manner and also increases road safety.



ROAD SERVICES

Employees are active en route around the clock for our customers, inspecting motorways and service stations and, where necessary, taking measures to ensure the high quality of the infrastructure.



SERVICE COMPANIES – CORE FIELDS



QUICK INCIDENT RESPONSE

Accidents, breakdowns, traffic jams: the employees in the motorway maintenance agencies and the traffic managers in the greater Vienna, Linz and Salzburg areas work tirelessly so that sections are quickly freed up again.



OPERATING TECHNOLOGY IN TOP FORM

Experts monitor, maintain and repair all electromechanical systems such as tunnel ventilation, lighting, emergency telephones and overhead displays.



CONSTRUCTION SITE MANAGEMENT

Renovations are absolutely essential for road safety.
Our construction site management makes sure that construction sites use up minimum space and time.

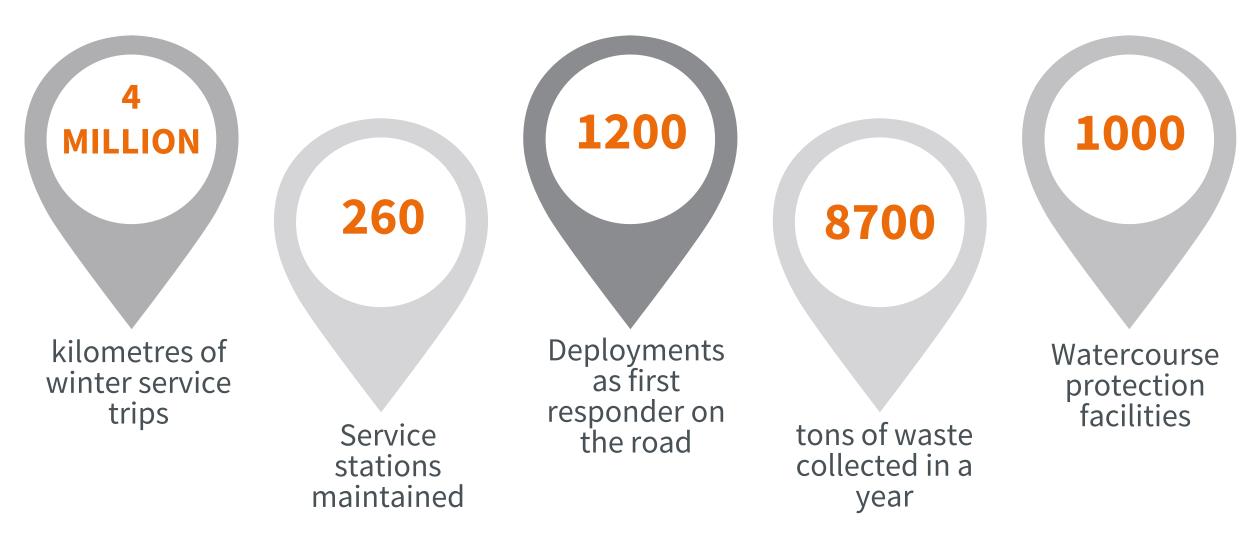


TOLL SUPERVISION: SERVICE AND CONTROL

All toll payers have a right to the monitoring of the adherence to the toll system. Employees ensure that this is always the case throughout the network, with a service-oriented attitude.



SERVICE COMPANIES – FACTS



TRAFFIC MANAGEMENT

TRAFFIC MANAGEMENT OBJECTIVES



- ♥ Increased traffic safety:
 Operation of modern tunnel systems
- ♥ Optimised traffic flow: Traffic management centres monitor and control traffic flow using modern telematics systems and ITS.
- ♥ High section availability: Control centre for heads of operations and support in incident management
- ♥ Up to date traffic information: Traffic situation and incident situations, construction site information, parking space utilisation, available parking, route recommendations



ASFINAG ALONG THE ROUTE

IN CONTACT WITH OUR CUSTOMERS





Service and control department

- Carries out toll controls and provides support regarding all questions on tolls.
- **♥** Supports our customers with advice and assistance and is a customer service professional.

Traffic managers

- Respond with rapid on-site assistance in the event of accidents and breakdowns in the metropolitan areas of Vienna, Linz and Salzburg.
- Professional cooperation with emergency services in the event of an incident.

ASFINAG ALONG THE ROUTE

IN CONTACT WITH OUR CUSTOMERS





Technical roadside inspection

- Provides increased traffic safety and identifies defects on vehicles before they become a problem.
- Carries out its inspections on behalf of the states and cooperates successfully with the executive.

Road services

- Monitors condition of road surface and all safety systems, independently repairs small defects.
- Outside of the traffic managers' areas: Professional cooperation with emergency services in the event of an incident.



BAU MANAGEMENT GESELLSCHAFT – CORE AREAS



NEW CONSTRUCTION AND RENOVATION

Bau Management GmbH (BMG) carries out all construction measures for the new construction and maintenance of the motorways and expressways. It also builds access and exit lanes, service stations and traffic control checkpoints, and implements noise protection measures.



NEEDS-BASED PROJECT DEVELOPMENT

BMG plans projects based on the requirements of people and the economy.

The planning process is open, and takes into consideration the interests of all those involved. Projects are developed in a comprehensible, transparent manner.



ASSET MANAGEMENT

In the framework of maintenance management, infrastructure facilities are permanently monitored and checked. BMG ensures that roads, tunnels and bridges are efficiently maintained with the greatest possible level of safety.



BAU MANAGEMENT GESELLSCHAFT- FACTS









Ongoing projects (preparation, construction and follow-up)





and supply

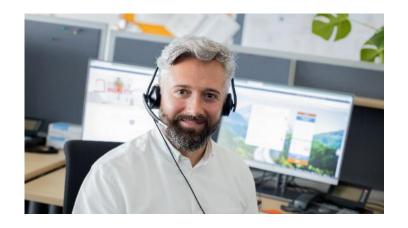


MAUT SERVICE GESELLSCHAFT – CORE AREAS



TOLL COLLECTION

Maut Service Gesellschaft (MSG) is responsible for collecting tolls. This includes passenger vehicle toll (time and distance-related) and truck toll (distance-related). MSG sends out substitute tolls if the toll hasn't been paid accordingly. It also caters to a large sales partner network.



CUSTOMER SERVICES

At our Service Center, well trained staff takes care of our customers' wishes around the clock and in 7 languages. It furthermore processes complains and organises trade shows and events, among others.



IT SERVICE PROVIDER

With bundled competencies
MSG provides all information
technology services to all companies
for their office locations and
operations on the ASFINAG road
network. MSG is also responsible for
marketing data lines and bandwidths.

MAUT SERVICE GESELLSCHAFT – CORE AREAS



PAYMENT SERVICES

Within the competence of MSG falls the settlement of truck and passenger vehicle tolls with providers such as fuel, debit and credit cards, PayPal and direct withdrawal. In addition, the processing of GO toll credits, payments of additional truck tolls and international tolls with TOLL2GO, EasyGo and EETS providers takes place at MSG.



ITS SERVICES

The expansion of the ASFINAG video system and sensor network, the provision of real-time traffic information, the implementations for software solutions for operations, the further development of Cooperative Services (C-ITS) and the support for the introduction of Automated Driving are located in the MSG.

TOLL PROCEEDS 2022

TOLL PROCEEDS (IN MILLION EUROS)



	2022	Change	2021
TOTAL TOLL PROCEEDS	2,443	+6 %	2,304
Total toll proceeds motor vehicles <= 3.5 tons	766	+17.9 %	650
Revenue from toll vignettes	540	+13.3 %	477
Section toll proceeds (Section toll segments)	226	+30.6 %	173
Total toll proceeds motor vehicles > 3.5 tons	1,677	+1.3 %	1,655

2022



2021

Change

PASSENGER VEHICLE TOLL - VIGNETTE

TOLL VIGNETTE RATES 2024: AN OVERVIEW FOR MOTOR VEHICLES UP TO 3.5T MPW





Vehicle category	annual vignette	vignette 2-month	vignette 10-day	vignette 1-day digitally only
A Single-track motor vehicle	38.50	11.50	4.60	3.40
B Cars and motor vehicles up to 3.5 t * Kfz	96.40	28.90	11.50	8.60

in EUR incl. VAT





^{*} Technically permissible maximum laden mass (tzGm), Motorhomes

MAUT SERVICE GESELLSCHAFT - FACTS



Annual vignettes sold – of that 62% in digital form



Section toll clearances



Enquiries at the service centre



transactions



IT services managed

As of 2022



CONSTRUCTION PROGRAMAND ASSET MANAGEMENT



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HAVE A SAFE TRIP, AUSTRIA!

CONSTRUCTION PROGRAMME

NEEDS – NEW CONSTRUCTION

Legal Requirements

- **♀** Second tunnel tubes acc. to **Road Tunnel Safety Act**
- **♥** Noise protection acc. to **Service Note Noise Protection on Federal Roads**

Conceptual Planning

- ♥ Construction of additional lanes → Level of Service
- New rest areas
- New junctions



CONSTRUCTION PROGRAMME

NEEDS – MAINTENANCE

Main objectives defined in ASFINAG's maintenance strategy:

- Sustainable and substance-preserving implementation of measures
 → avoidance of backlog
- Road Safety Target Index: > 97 % of entire network must be in a better condition than "poor" (Class 5)
- Network Availability Target value: > 95 % of entire network must be free of construction sites
- ♥ Costs of Construction Programme deviates < 10% of expected life cycle costs</p>



ASSETS AND CHALLENGES IN NUMBERS

- Maintenance management for Austria's motorway network (more than 2,200 km) incl. more than 18.000 associated civil engineering structures.
- Q Due to the intensive expansion of the network in the 1970s to 1990s, a continuous increase in the need for a structural maintenance can be expected in the coming years and decades. The maintenance budget is already over EUR 600 million in 2022 and will continue to increase in the coming years.
- ▶ Processing of more than 300 project requirements per year (renovations, renewals and smaller construction measures)
- ◆ Around 6.500 technical statements on abnormal goods transports
- **Q** Coordination of ASFINAG employees in app. **220 national and international committees**
- **♀** Coordination of **> 50 ongoing research projects**

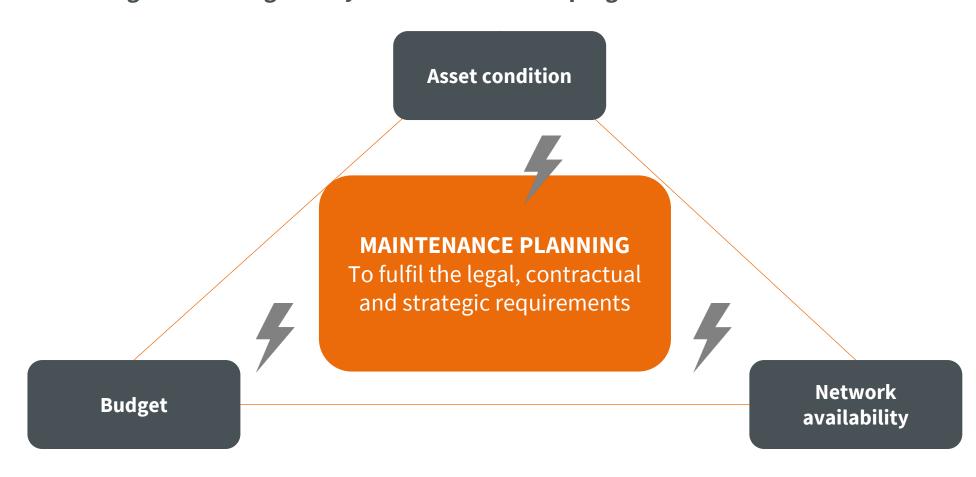
CORE STRATEGY MAINTENANCE

Guiding principle

"When it comes to maintenance, ASFINAG strives for an overall optimum for its customers within the framework of the conflicting goals that result from traffic safety, availability, sustainability, the cost-effectiveness of measures, as well as from future requirements and budget restrictions"

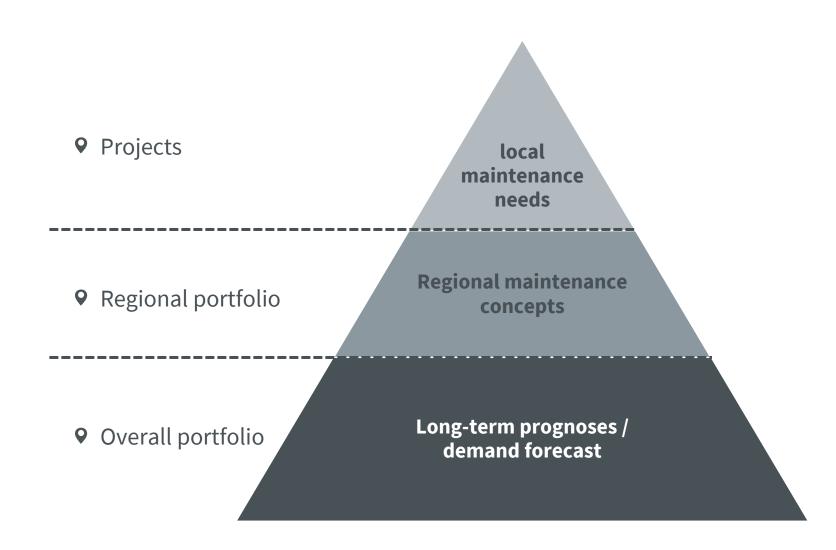
AIMS OF THE MAINTENANCE PLANNING

Medium and long-term manageability of the construction program



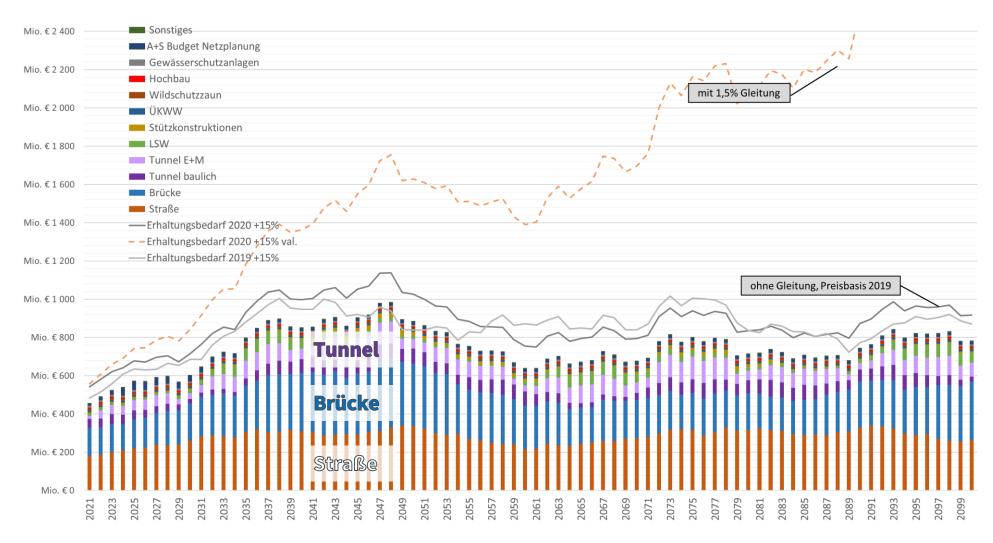


METHODOLOGY OF THE MAINTENANCE PLANNING





LONG-TERM DEMAND FORECAST





Condition data – pavement

- Basis are Austrian guidelines
 RVS 13.01.15 and RVS 13.01.16
- Pavement surface characteristics
 - Rutting (rut depth under 2 m straight edge)
 - Longitudinal evenness (International Roughness Index IRI)
 - Cracking (% of cracked area)
 - Surface defects (% of surface defects)
 - Skid resistance (longitudinal friction coefficient)
- Collected on each single lane and evaluated sections of 50 m length every 4 years
- → Main input for analysis for pavement







Data collection – pavement condition



Monitoring, control and inspection - bridges

According to Austrian guidelines RVS 13.03.11

Monitoring

interval: every 4 months execution: traffic manager

scope: visit directly from the vehicle

to defects and damages

result: written notification of damages

otherwise no recordings necessary

Controls

interval: every 2 years

execution: employees of Asset Management

scope: visit without a scaffolding or lifting equipment

inspection of all building elements

result: written documentation of new damages and

defects and changes to the last inspection;

urgent measure

Inspections

interval: every 6 years

execution: external civil engineer

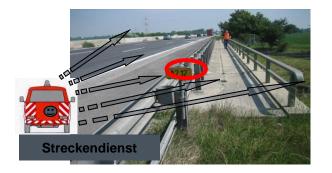
scope: inspection of all building elements with

a lifting equipment

result: written documentation of new damages and

defects, requirement of maintenance and

repair works with a time criterion





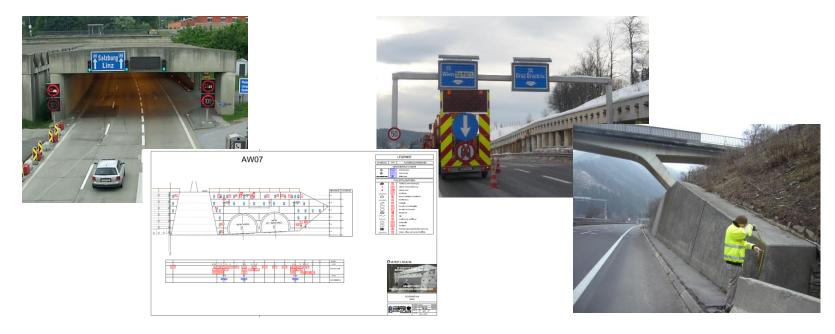




Monitoring, control and inspection - other structures

Procedure according to Austrian guidelines

	guideline	inspections	controls	monitoring
Road tunnels	RVS 13.03.31	every 10 years	2 years	every 4 months
Anchored constructions	RVS 13.03.21	every 10 years	3 years	annually
Directional gantries	RVS 13.03.51	every 6 years	2 years	every 4 months
Unanchored				
Retaining walls	RVS 13.03.61	every 12 years	3 years	annually
Noise protection walls	RVS 13.03.71	every 12 years	4 years	annually





Assessment of bridge condition according to RVS 13.03.11

Classification	Damages	Maintenance measure	Mark
very poor condition	very serious damages	immediately required repair	5
poor condition	serious damages	Short-term (within 3 years)	4
fair condition	moderate damages	Medium-term (within 6 years)	3
good condition	minor damages	Correction of the damages by maintenance work	2
very good condition	Without or very little damages	-	1



DASHBOARDS



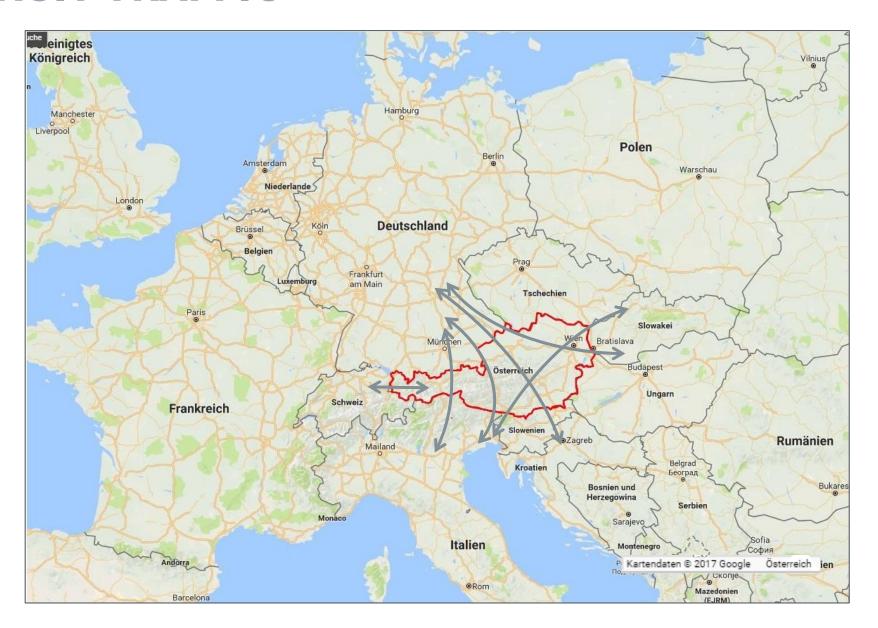
ASSET MANAGEMENT SYSTEM OF **AUSTRIA'S** HIGH-LEVEL ROAD NETWORK



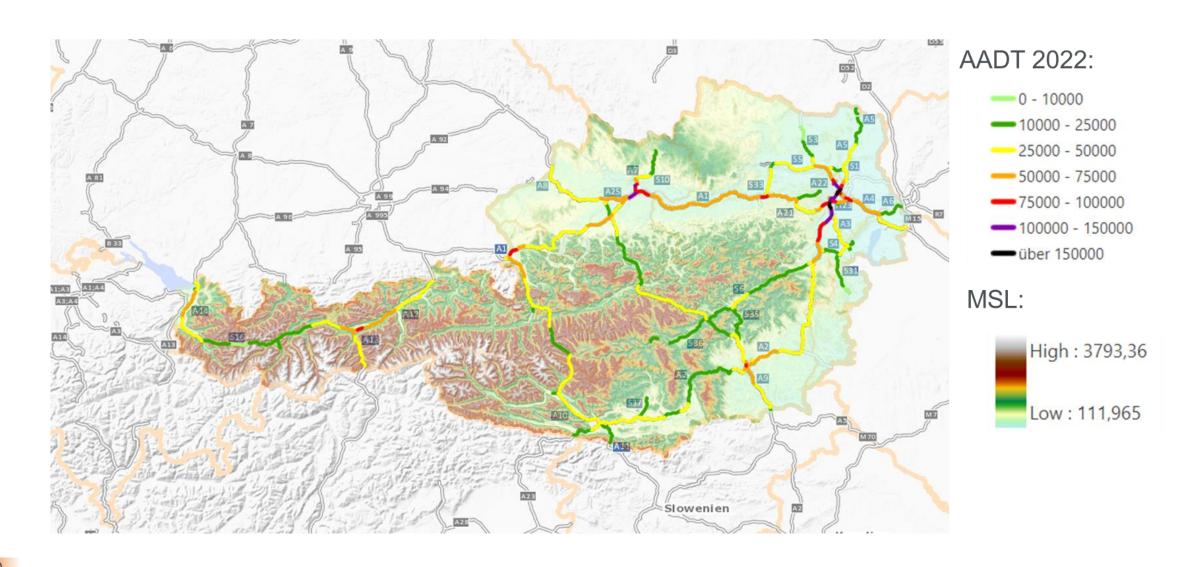
DETAILED PRESENTATION



TRANSIT TRAFFIC



AUSTRIAS TOPOGRAPHY AND TRAFFIC VOLUME



ASSET MANAGEMENT ORGANIZATIONAND CHALLENGESIN FIGURES



Regional structural maintenance teams

WEST

NORTH

SOUTH

EAST



Engineering

- strategic asset management
- internal technical consulting
- documentation and archive



Maintenance management

- Condition assessment
- Technical expertise on site

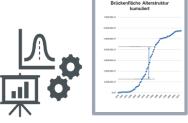


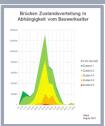
Requirement management

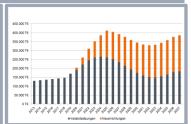
- Definition of technical treatments
- Bundling, defining and ordering projects

- Asset management strategy
- Reporting (condition, treatments, fulfillment of strategy goals)
- Technical portfolio management
- Internal technical consulting
- Standardisation (internal and external guidelines)
- Management of R&D and innovation
- Archives

















Structural MaintenanceCondition assessment



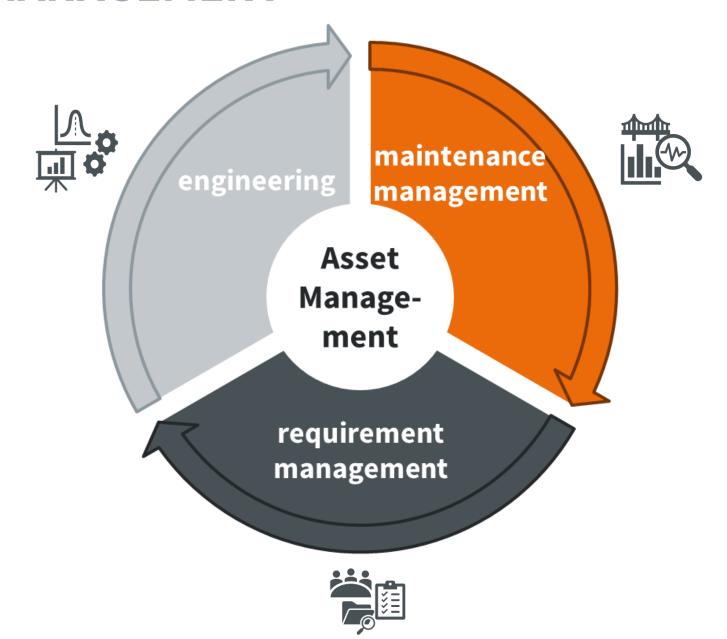


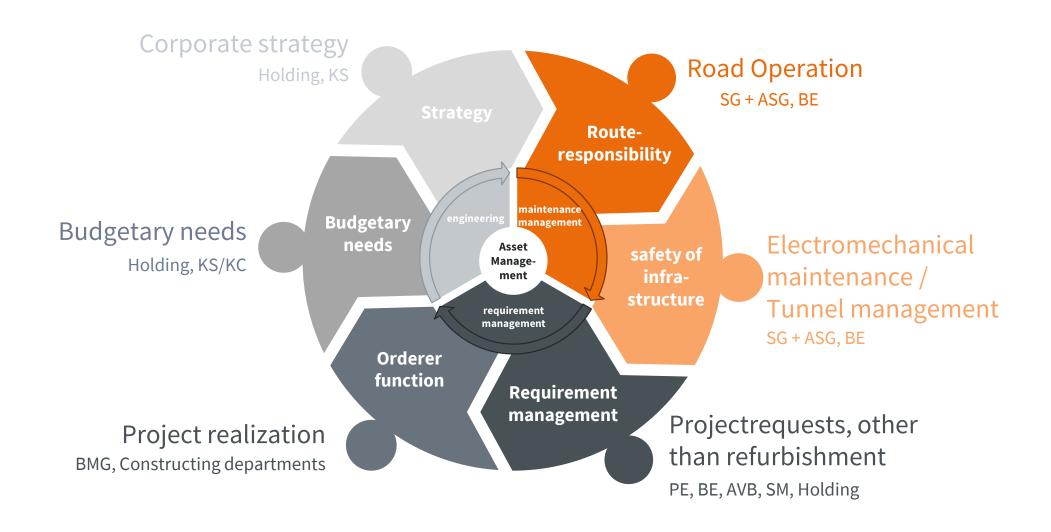
Requirements Management defining and ordering projects











ASSET MANAGEMENT CHALLENGES IN FIGURES



STRUCTUAL MAINTENANCE(BEM)

Maintenance Management requirements management

- Approx. 2,150 main inspections per year.
- Approx. 4,550 minor inspections per year.
- Approx. 120 special inspections per year.
- The total number of **project demands** has steadily increased in recent years and is currently (2022) more than **1000**.
- More than 200 projects annually prepared for project definition and ordering.
- About 6,500 technical advices on special transports (heavy goods, oversized vehicles)

BUDGET FOR MAINTENANCE

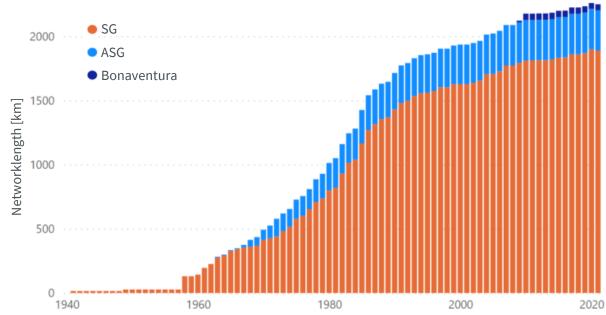


Regional divisions / Networkdevelopment

Regional divisions



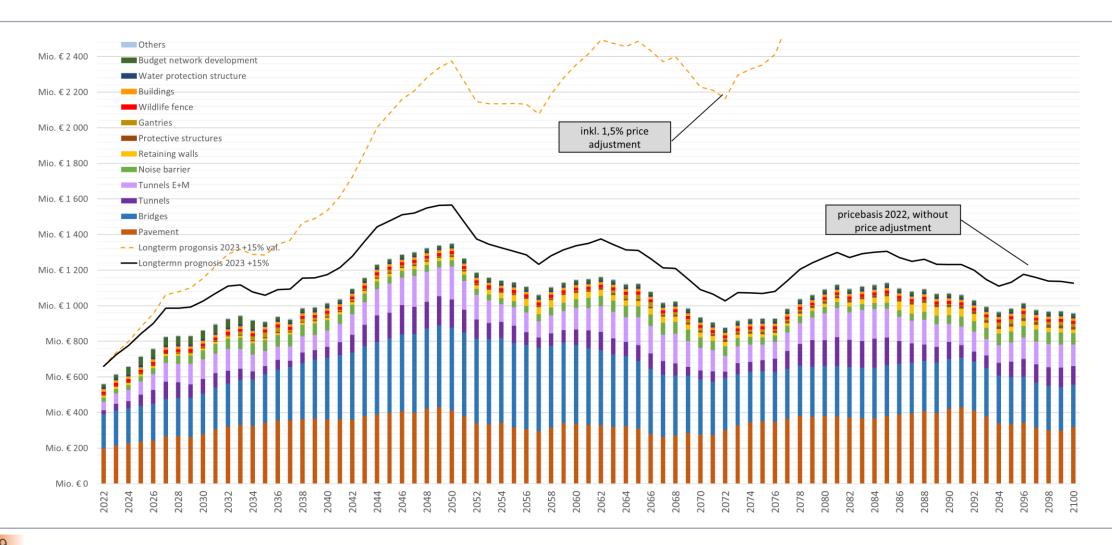
Network development



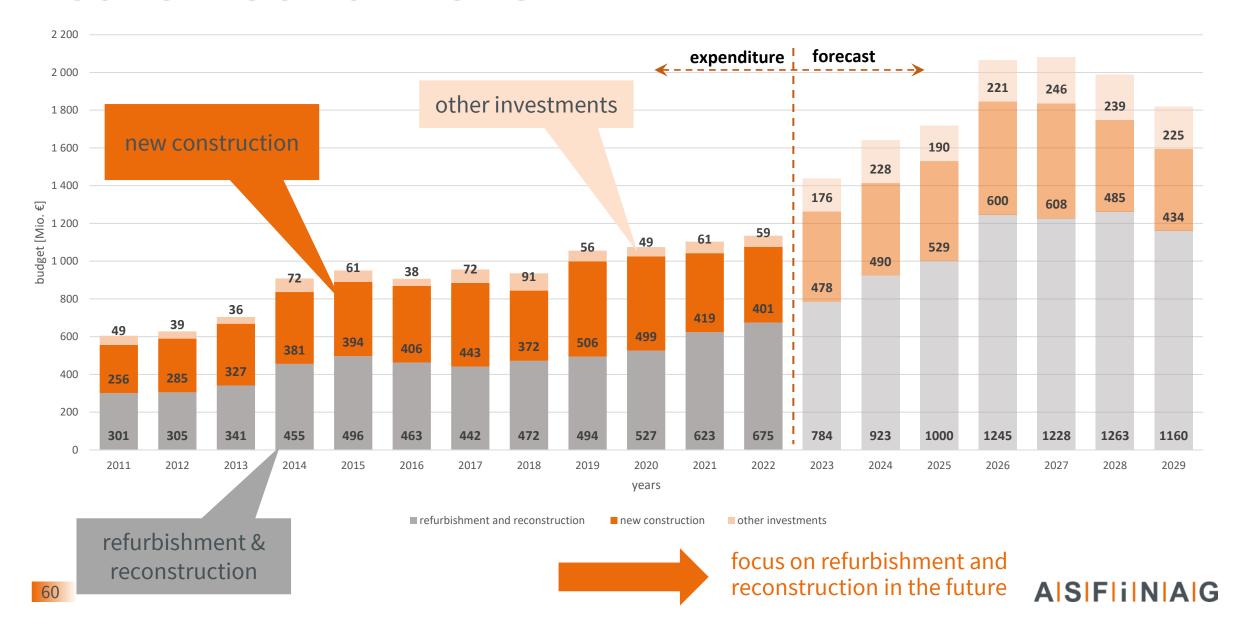


BUDGET FOR MAINTENANCE

long term forecast



CONSTRUCTION BUDGET



BUDGET FOR MAINTENANCE



Pavement

Bridges

Tunnel

Tunnel E+MRetaining wallsNoise barriers

Buildings

Protective structures

Road E-facilities

Road equipment

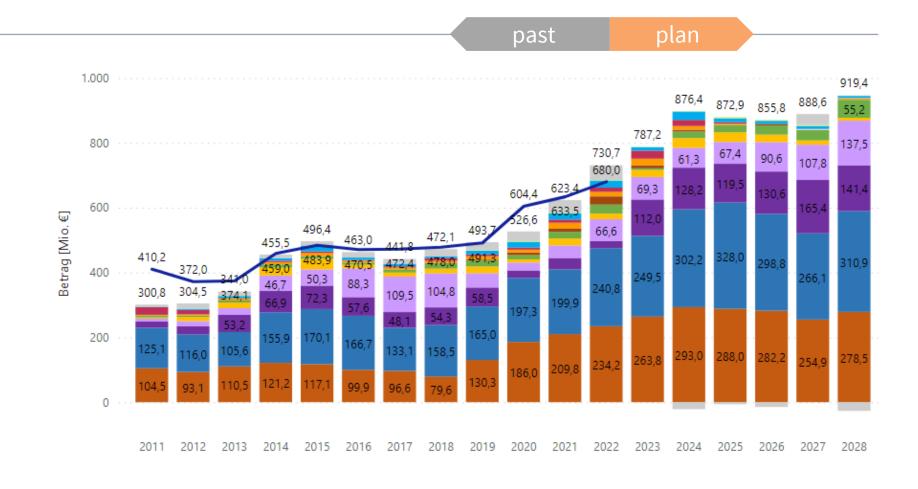
Approved budget

Toll facilities

Others

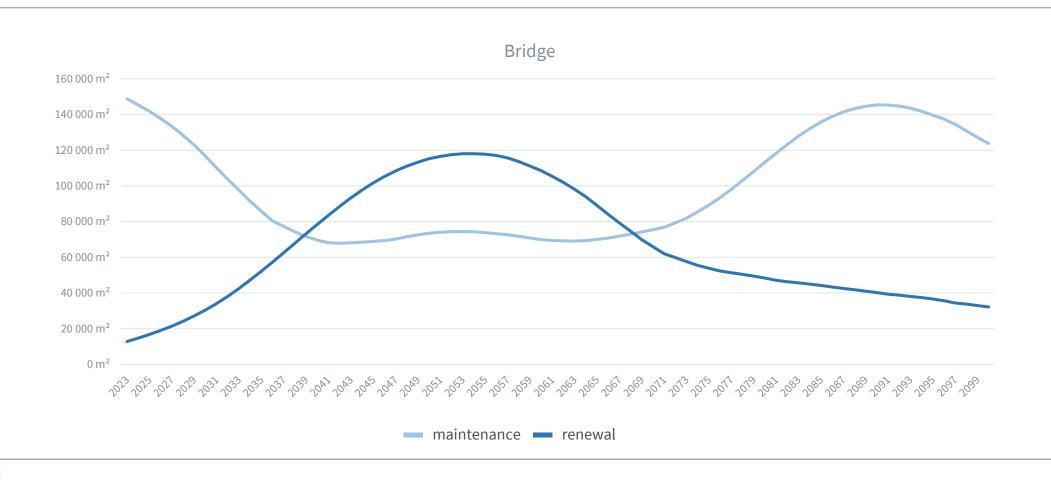
Water protection structure

Development of the maintenance budget



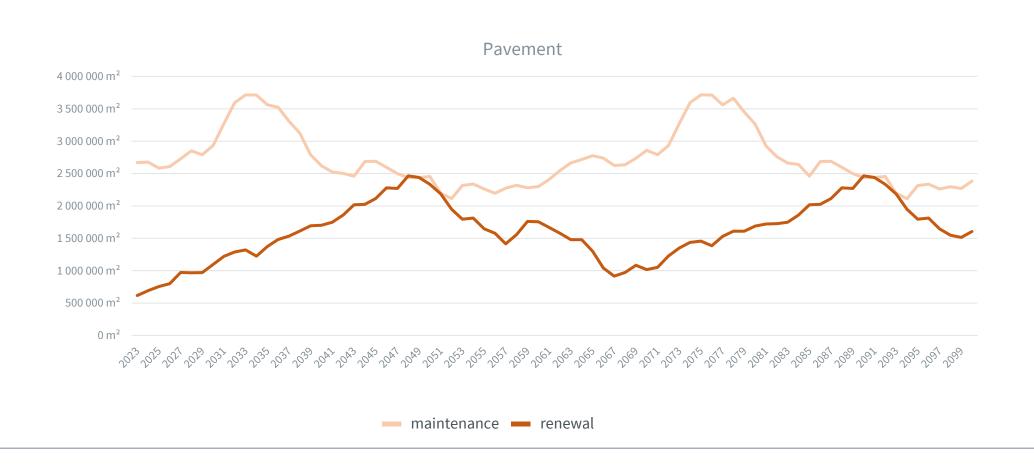
AMOUNT FOR MAINTENANCE - BRIDGE

Devolpment of the quantities



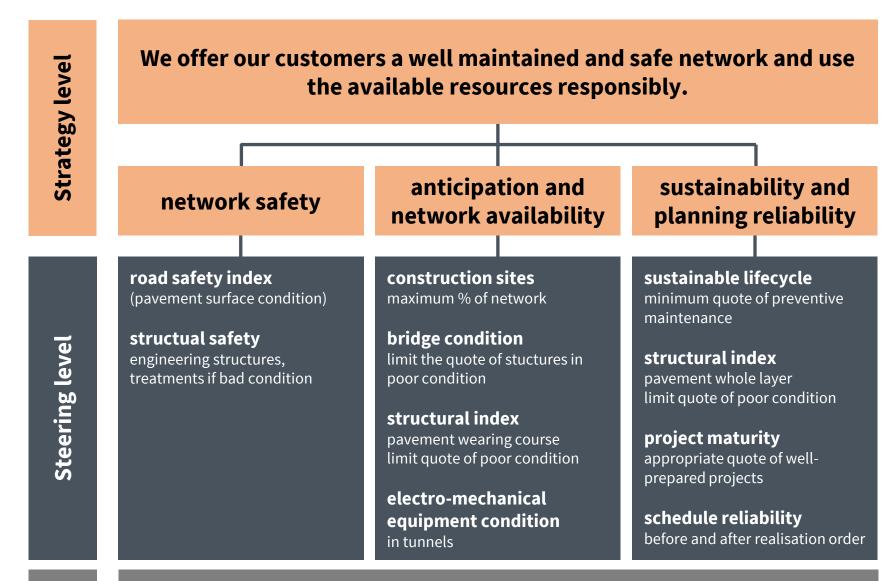
AMOUNT FOR MAINTENANCE - PAVEMENT

Devolpment of the quantities





ASSET MANAGEMENT STRATEGY



65

ASSET MANAGEMENT STRATEGY

anticipation and sustainability and network safety network availability planning reliability Lifecycle management annual inspection plan asset database (IMT_{2.} PaveD) Operational implementation level steering committee benchmarks for treatments pavement management costs and time of construction annual report Project requirement list of key structures management annual network (PAM) corridor analysis condition report bundling of treatments technical training information management **Asset management manuals**

ASSET MANAGEMENT STRATEGY

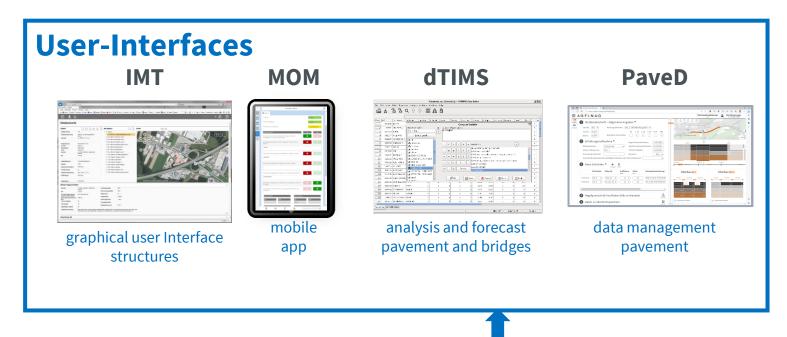
Asset management manuals

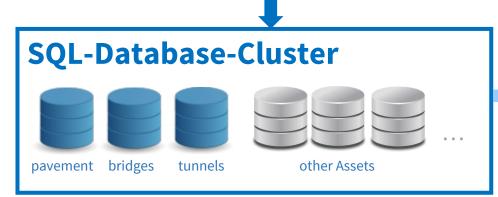
- Asset management manuals essentially provide an asset-specific overview of:
 - The layout of structures (components, inspection elements)
 - The data acquisition and attributes of the database
 - The inspections
 - The definition of measures
 - Lifecycles and forecasts
 - Strategic recommendations

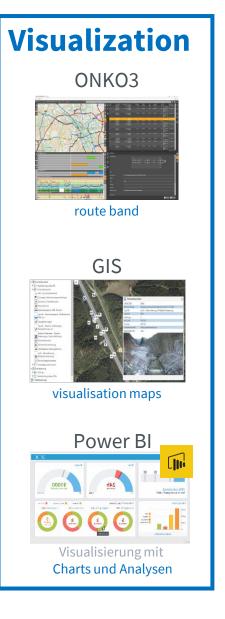
We provide these manuales for:

- Pavements
- Bridges
- Tunnels
- Buildings
- Retaining walls
- Noise barriers
- Gantries
- Protective structures
- Datamanagement

Datamanagement

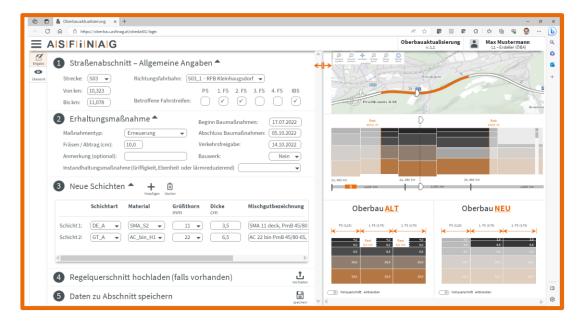




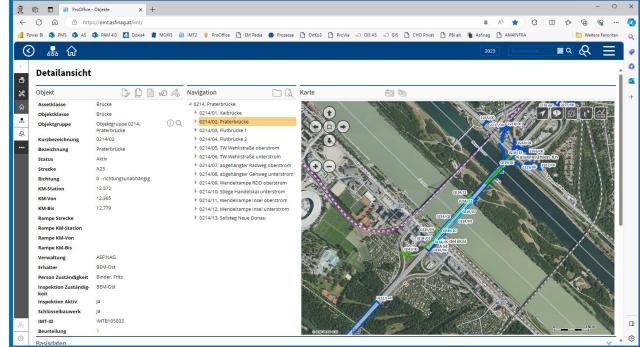


Graphical user interface (GUI) for engineers

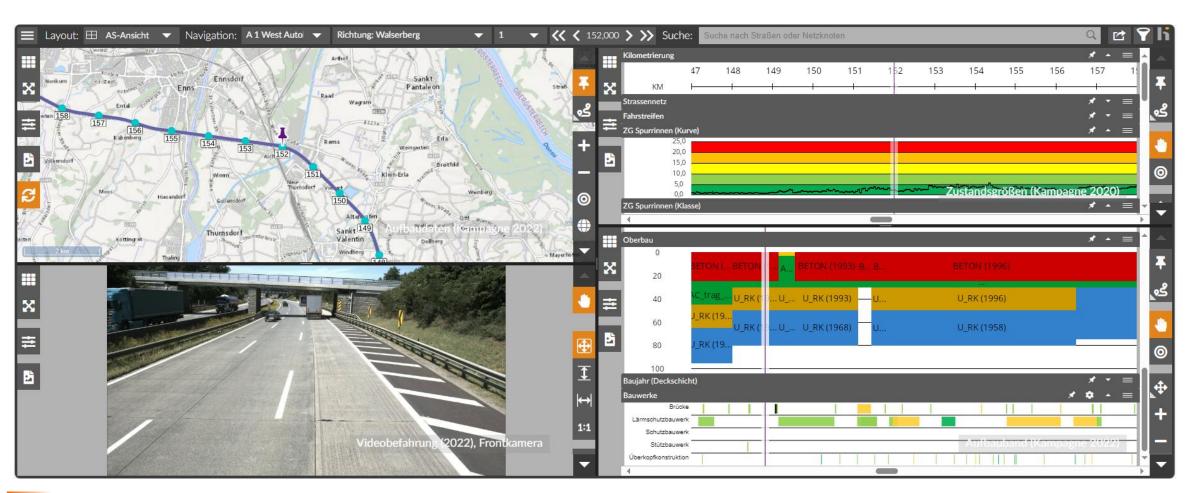
Pavement (PaveD)



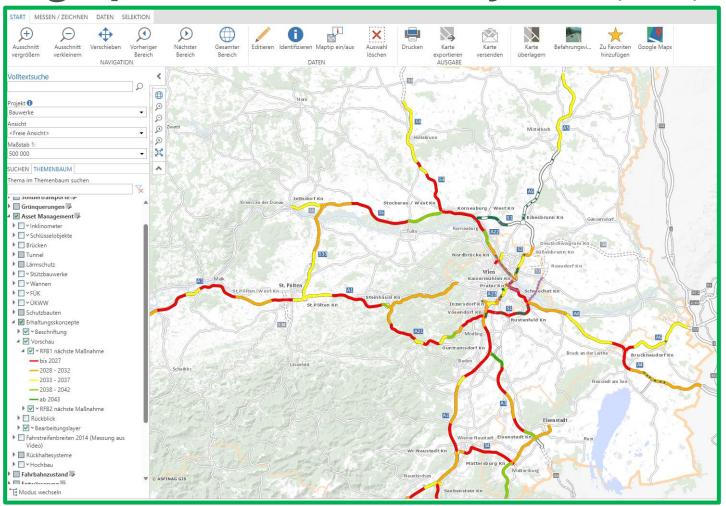
Structures (IMT)



Route band visualization



Geographical information system (GIS)



Section with major refurbishment

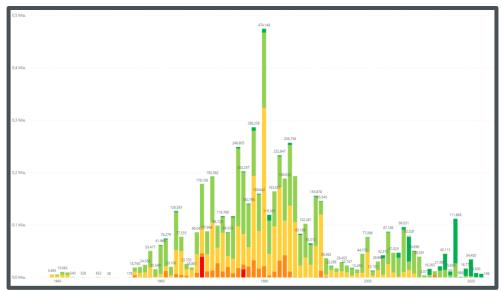
- bis 2027
- **—** 2028 2032
- 2033 2037
- 2038 2042
- -ab 2043

ASSET MANAGEMENT - TOOLS

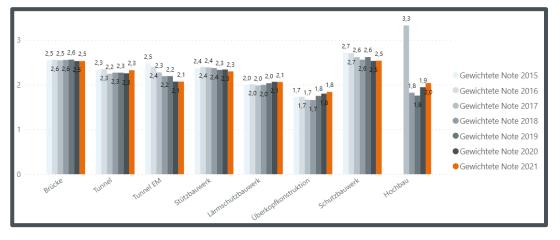
Business Intelligence (PowerBI)



Construction budget cockpit



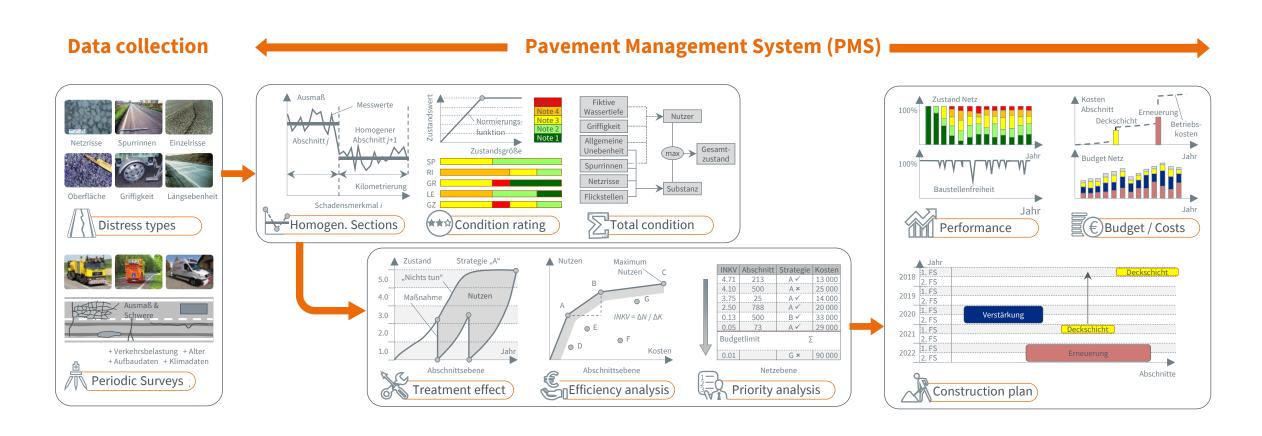
Bridges (area) over time of construction



Average condition of structues

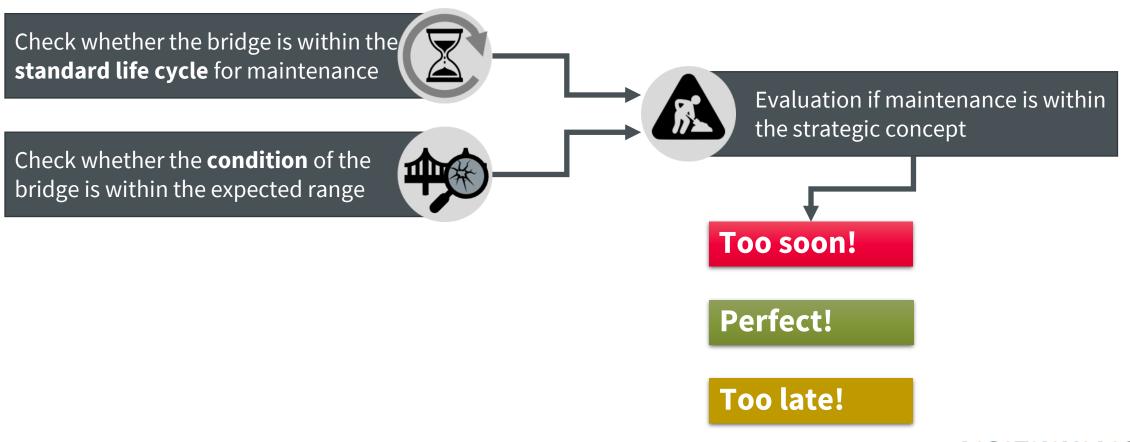
ASSET MANAGEMENT - ANALYSIS

Pavement management overview

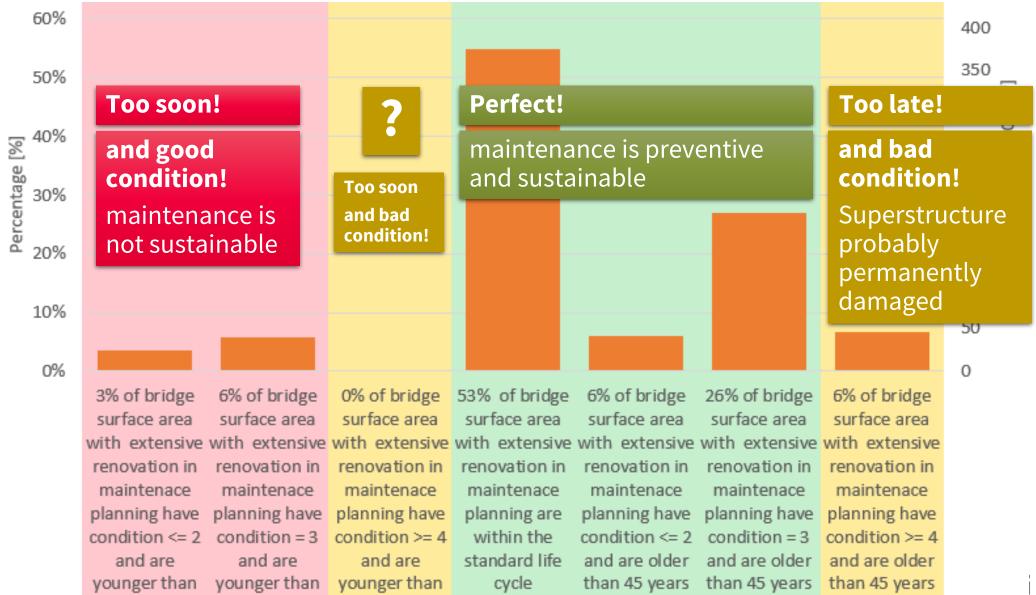


ASSET MANAGEMENT – EVALUATION OF TREATMENTS

BRIDGE MAINTENANCE



ASSET MANAGEMENT – EVALUATION OF TREATMENTS



33 years

33 years

33 years

CONCLUSION

♥ Being financially independet stable funding of budget

♥ Being efficent purpose driven company structure

♥ Being consistently

Asset management strategy derived from company strategy, mission and vision

Peing comprehensible and connectable use transparent and clear explanation for budget needs and future development

♥ Have a good and experienced team

develop and take care about your team be attractive at the job market



BACKUP SLIDES



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HAVE A SAFE TRIP, AUSTRIA!

FRAMEWORK LEGISLATION

- **♥ ASFINAG Enabling Act 1997** (ASFINAG Ermächtigungsgesetz 1997)
 - → refers to the central element: the Usufruct Contract
- **Q** Austrian Federal Road Act ("Bundesstraßengesetz")
 - → defines the Federal Roads (high-level road infrastructure)
 - → tasks of ASFINAG are linked to the Federal Roads
- **♥ Federal Road Toll Act 2002** (Bundesstraßenmautgesetz 2002)
 - → regulates tolls and is decisive for the revenues of ASFINAG and thus the financing of the high-level road network



FINANCING OF THE TASKS OF ASFINAG (1)

- Cost for ASFINAG's tasks have to be borne by the revenues ASFINAG gets from tolling.
- In order to fulfil her tasks ASFINAG is entitled to carry out credit transactions on the capital market.
- In order to optimize the financing conditions for ASFINAG the Federal State assumes liabilities for the debts of ASFINAG (only a liability, no subsidy).
- ASFINAG has to pay a fee for state liabilities concerning her debts.



FINANCING OF THE TASKS OF ASFINAG (2)

MORE THAN 50 YEARS OF TOLLING EXPERIENCE

9 1968: First toll station on an Austrian highway



♀ 1997: Introduction of a toll sticker for light vehicles (Vignette)

♀ 2004: Introduction of "GO-Maut" – distance related toll for heavy

vehicles

→ DSRC multi-lane free flow system

9 2017: Introduction of a digital toll sticker for light vehicles

9 2018: Start of "GO-Maut 2.0" (start of contract period 1.1.2019)



ASFINAG CORE STRATEGIES

SUSTAINABILITY

- **9 1,500 fast charging points** for electric vehicles on the ASFINAG network by 2030 (with ≥150kW) **serving light vehicles**
- Plus 1,300 charging points serving heavy vehicles until 2035 (1/3 fast charger)
- ◆ ASFINAG's own passenger car fleet is currently ~40% electric and by 2025 all light vehicles will be fully electric
- ◆ ASFINAG will foster the production of electricity by using photovoltaic, wind and small hydropower systems. A renewable energy production capacity of 100MWp shall be installed by 2030.





The new climate action framework for the transport sector: sustainable – resilient – digital avoid – shift – improve

AUSTRIA'S 2030 MOBILITY MASTER PLAN

ACTIONS TAKEN BY ASFINAG

Fostering e-mobility

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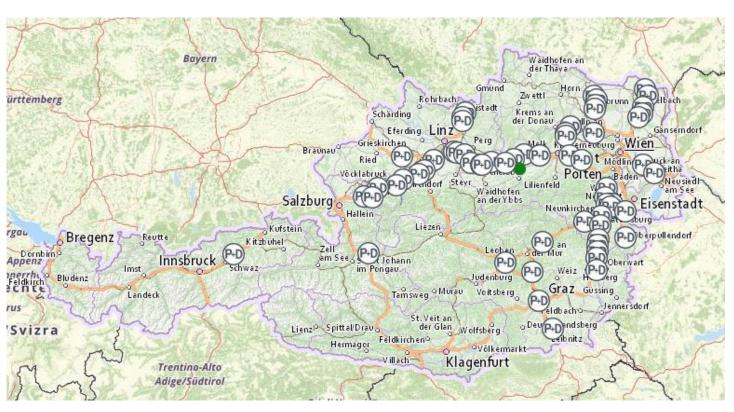


AUSTRIA'S 2030 MOBILITY MASTER PLAN

ACTIONS TAKEN BY ASFINAG

Enhancement of multimodality

- ♥ Following its vision 2030, ... to become a reliable, innovative and sustainable mobility partner ..., ASFINAG is relying on the combination of individual and public transport
- Therefore, ASFINAG will increase its Park & Ride and Park & Drive capacity, of course with charging points for e-cars, and offer carpooling apps and information services





AUSTRIA'S 2030 MOBILITY MASTER PLAN

ACTIONS TAKEN BY ASFINAG

Digitalisation for sustainability

- ▼ To enable direct exchange of information between vehicles and the infrastructure ASFINAG started its C-ITS roll-out in 2021 more than 500 C-ITS units will be installed on the Austrian motorway network





