ASSET MANAGEMENT OF THE AUSTRIAN MOTORWAY COMPANY ASFINAG

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Technics – Innovation - Environment

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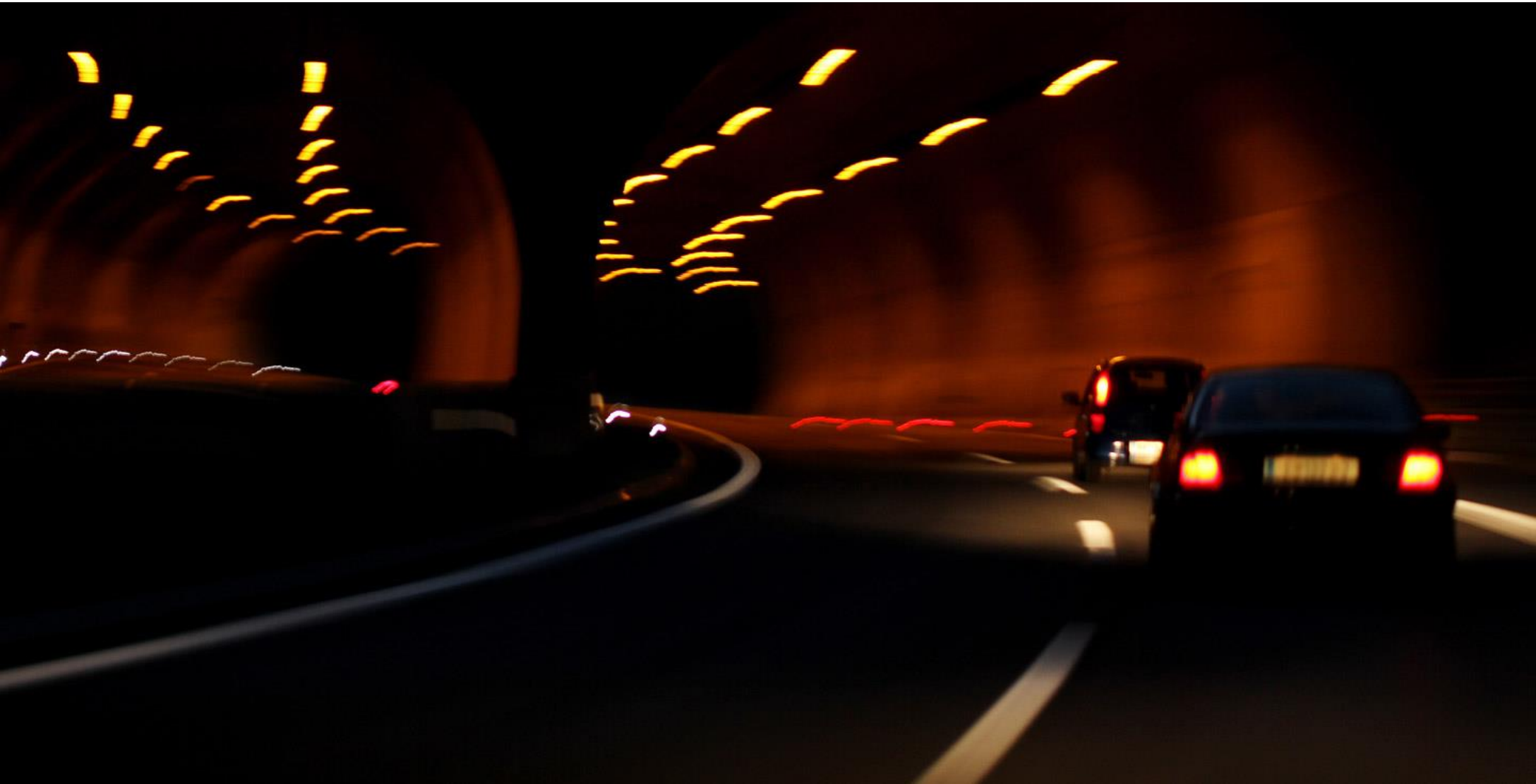
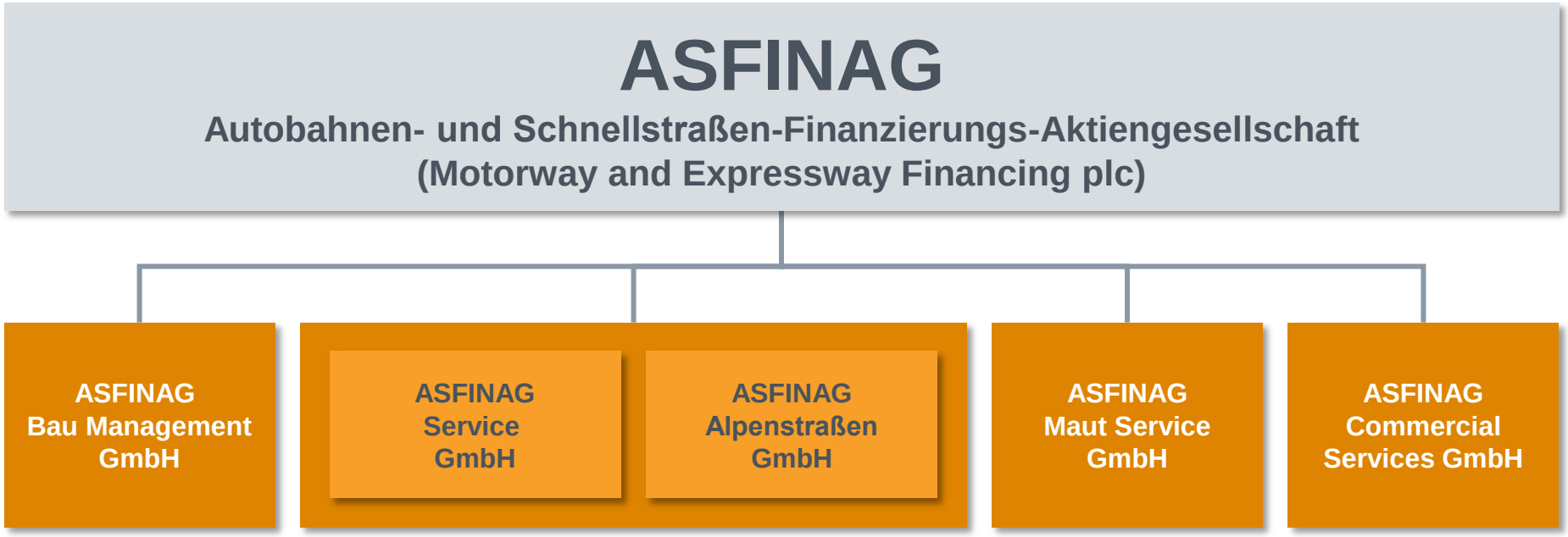
Motorways and Expressways in Austria

Motorways and Expressways in Austria

ASFINAG



The ASFINAG Group



Key Figures:

- Length of network: 2,178 km
- Lane kilometres: 11,594 km
- Tunnels: 150
- Kilometres in tunnels: 354
- Bridges: 5,192 (total area 5,7 km²)
- Existing noise protection facilities: 1,275 km (at the roadside and along central reservations)
- Total area of noise protection walls: 4,1 km²

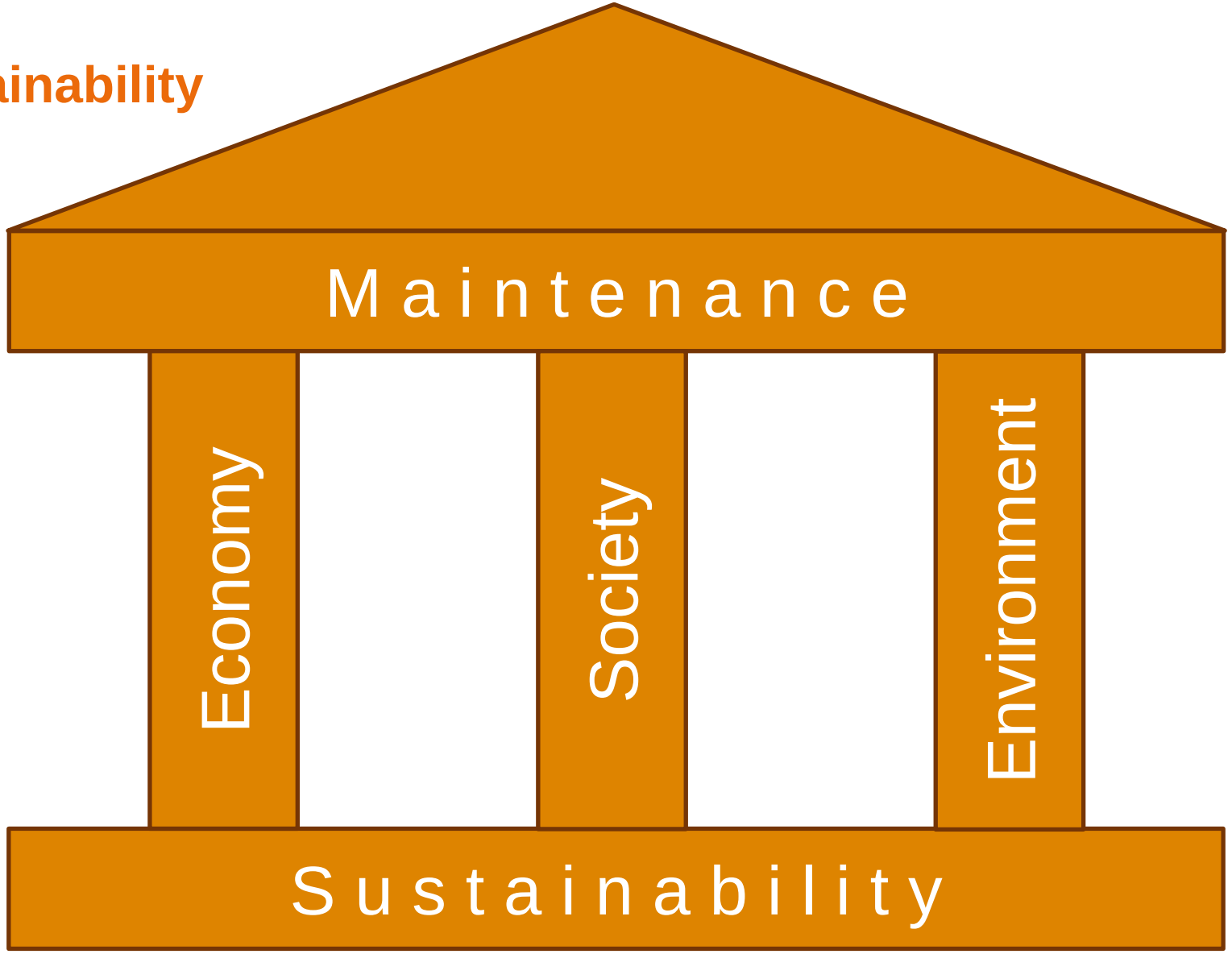
ASFINAG Asset Management Vision

Efficient survey of the condition of the ASFINAG Network

„Define the right maintenance measure at the right time“

High availability and higher traffic safety

Sustainability



Prozess towards an integrated Maintenance Strategy

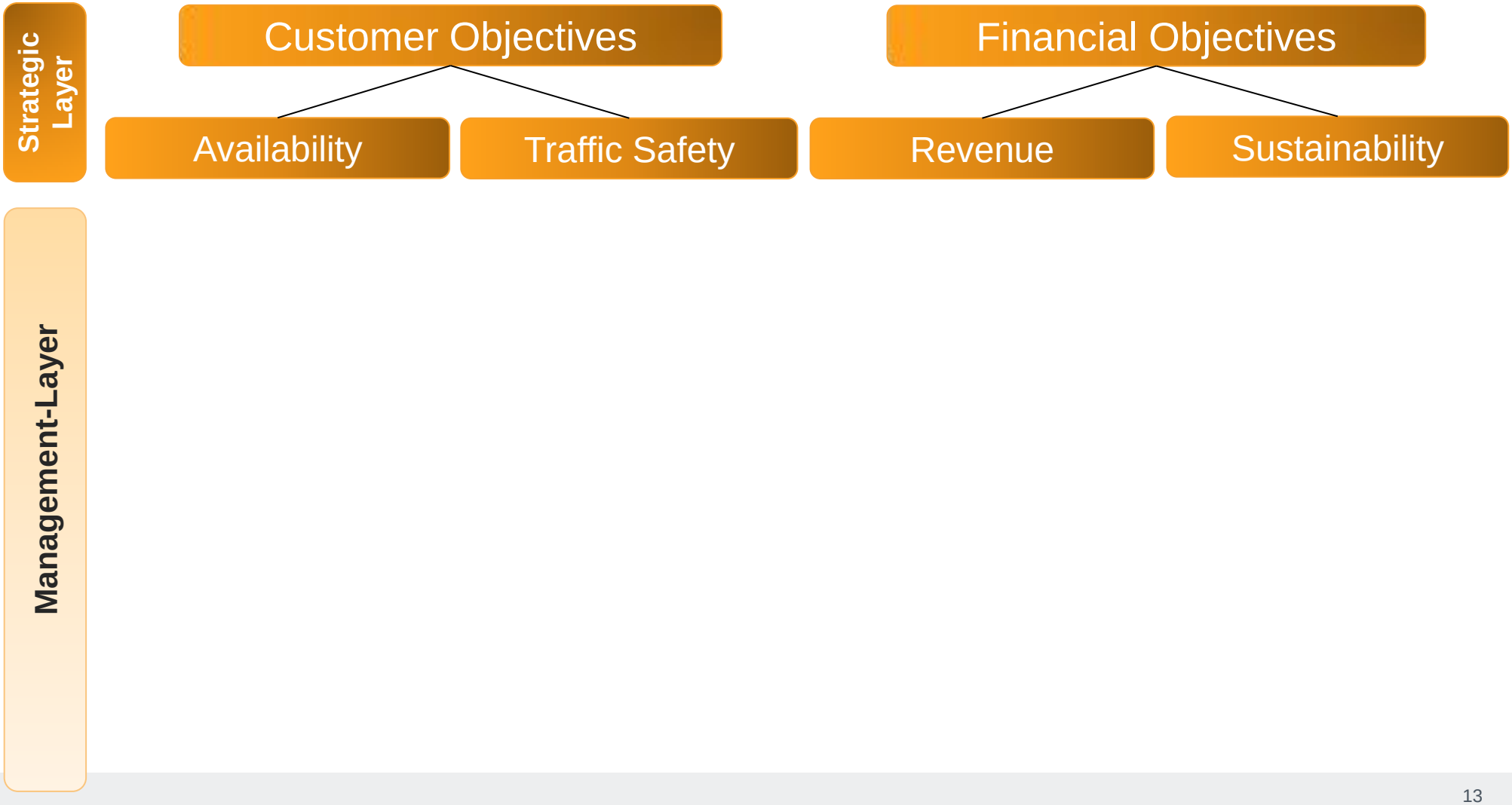
Process towards an integrated Maintenance Strategy

Questions to be answered:

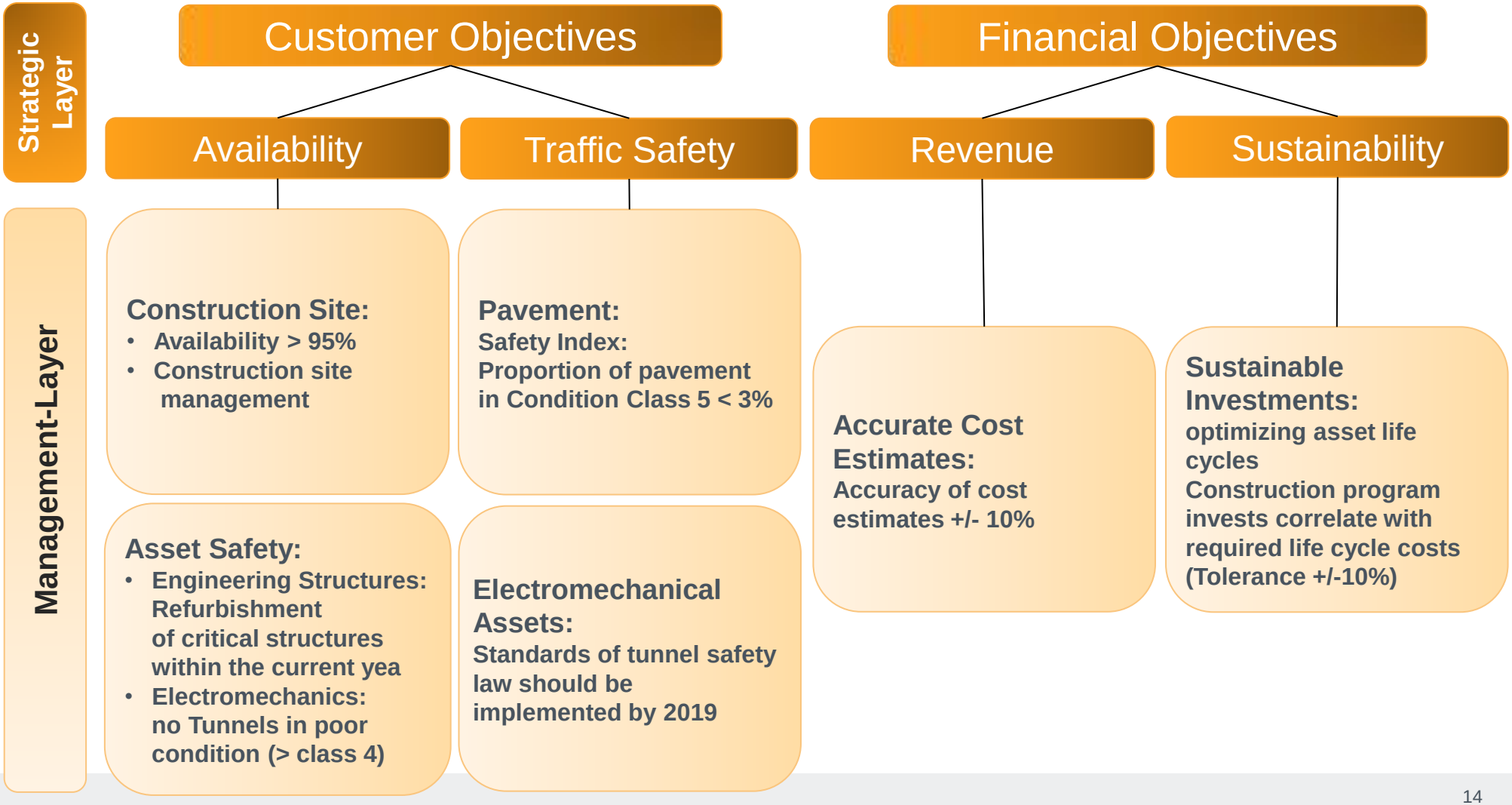
- How much money is needed to keep the value of ASFINAG's assets constant ?
- Should ASFINAG make an effort to raise the value of its assets?
- Which type of measures is the best one?
- What is the best time to carry out a specific measure?
- Is it better to rebuild constructions or to carry out extensive maintenance measures to extend lifespan?
- Which activities are required to maintain the existing high safety level of ASFINAG's road network?

Maintenance Strategy

Maintenance Strategy



Maintenance Strategy



Maintenance Strategy (Management Layer)

Customer-related Objectives

Availability

Minimize the impact of construction sites and assets in critical conditions on the availability of the ASFINAG road network.

- **Construction Site**
  - Construction Site Index should be higher than 95%)
  - construction site management team

- **Asset Safety**
  - Safety of Engineering structures

    As far as engineering structures are concerned, the objective is to refurbish or to replace a construction within one year, if its condition is very poor (class 5).
  - Usability of Electromechanical Assets

Maintenance Strategy (Management Layer)

Customer-related Objectives

Traffic Safety

- **Pavement**
  - Safety Index
    Condition 5 less than 3 %

- **Electromechanical Assets**
  - Guidelines of Tunnel Safety law
    Implemented by May 2019
  - Usability of Electromechanical Assets

Maintenance Strategy (Management Layer)

Financial Objectives

- ***Sustainability***
  - In order to ensure sustainable maintenance, life-cycle-cost (LCC)-analysis for every project
  - Construction program investments correlate with required life cycle costs (Tolerance +/-10%)

    - ***Pavement:*** Data based prognoses system
    - ***Engineering Structures:*** The required costs are calculated on the basis of a representative contingent of engineering structures which is extrapolated over the overall road network

Asset Management Systems

- Pavement Management System
- Engineering Structure Management
- Electromechanical Assets

Conclusions

Conclusions

- Roads are significant public assets
- Aging infrastructure requires increased road maintenance
- Investing in maintenance at the right time saves significant future costs
- A long term evaluation should be undertaken
- Regular monitoring of asset condition and performance is essential
- Maintenance investment must be properly managed


Thank you for your attention!