FOREST ROAD CONSTRUCTION
OLD WINE IN NEW BOTTLES

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AUSTRIAN FEDERAL FORESTS

Key data (31.12.2014):
- Timber harvested (m³): ~ 1.500.000
- Total area (ha): ~ 850.000
- Thereof forests (ha): ~ 510.000
- Employees (average): 1.133
- Management units: 15
- Buildings: ~ 4.200
- Real estate contracts: ~ 24.000
- Forest districts: 121

Profit Centre Services:
- 35 Team members all over Austria
- Forest management and consulting
- Tourism and infrastructure projects
- Forest road network planning (~ 100 projects/year)
- Arborist services and urban tree expertise
FOREST ROAD NETWORK IN AUSTRIA


[http://www.salzburg.gv.at/sagisonline/]
PROCEDURE OF PLANNING AND CONSTRUCTION

Planning
- Feasibility study
- Planning of variants
- Application

Approval
- Forest law
- Nature protection law
- Water rights, ...

Construction
- Technical supervision
- Ecological supervision, ...
- Final inspection
CHALLENGES – PLANNING PROCEDURE

› Neighborhood relations
› Requirements of authorities:
  › Detailed variant planning
  › Digital terrain models
  › Visibility studies, ...
CHALLENGES – NATURE PROTECTION (1)

Evaluation of interference (natural environment):
- Special fields
- Intensity
- Relevance
- Legal requirements

Compensation:
- Searching for areas
- Assessment
- Coordination

Conceptual design:
- Rough concept
- Cost estimation
- Coordination

Project development:
- Detailed planning
CHALLENGES – NATURE PROTECTION (2)

Interference

Compensation
Ecological Construction Supervision (ECS):

- Authorities are attaching conditions to the approvals (e.g. Nature protection law)
- ECS is responsible for the environmental compliance and documentation
- Different concerns between landowners, neighbors, construction companies and authorities, ...

CHALLENGES – NATURE PROTECTION (3)
CHALLENGES – WATER PROTECTION

- Increasing requirements of authorities:
  - Technical crossing of torrents and water bodies
  - Dimensioning of bridges, fords and culverts
  - Restrictions in water protection areas
  - Analysis of watersheds, ...
Traditional slope supporting systems:
- Ripraps
- Wooden Crib Walls, ...
New slope supporting systems:
- Reinforced earth
- High-performance grid, ...
CONCLUSIONS

› Increasing requirements of authorities → increasing standards of planning
› Complexity of approvals → continuing coordination (landowners, neighbors, authorities, partners, ...)
› Nature and water protection as basic condition
› Forest road projects <-> project management
› Comprehensive expertise of forest engineers and a strong network of partners is essential:
  › geologists, ecologists, water engineers, ...
› Utilization of new slope supporting systems
› Expertise of construction company as success factor
› **Forest road network planning and construction is a never ending learning process**
THANK YOU!