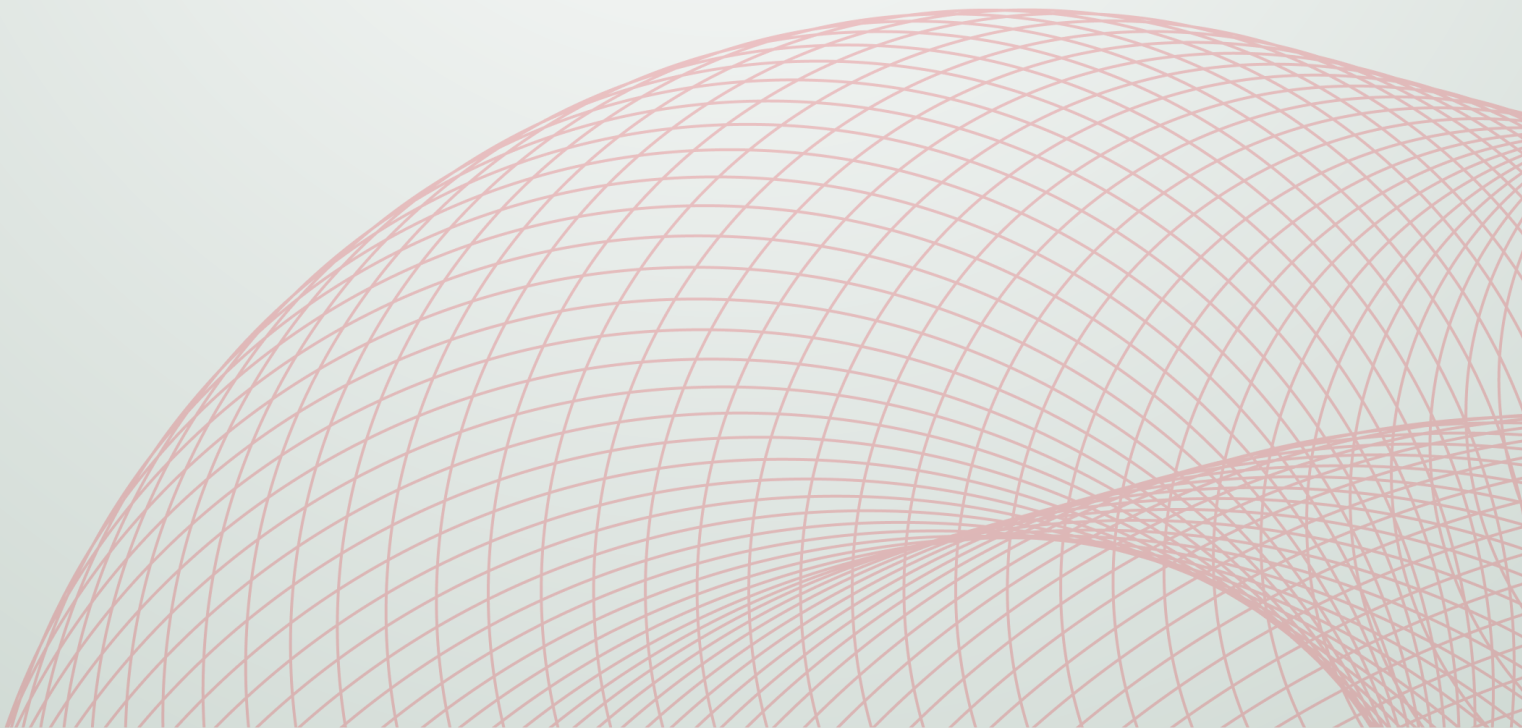


Climate Risk Analysis ASFINAG

A|S|F|i|N|A|G

2025
CASE STUDY



BACKGROUND



ASFINAG is the operator of Austria's motorway and expressway network and is responsible for the planning, construction, operation, toll collection and maintenance of one of the country's most important critical infrastructures.



Climate change is increasingly presenting ASFINAG with new challenges in operating and maintaining its transport infrastructure. In order to systematically assess the expected changes in climate-related risks over the next 75 years, ASFINAG — together with BC Consulting — initiated a proof of concept for a climate risk analysis. The goal was to jointly develop and test a practical, taxonomy-compliant methodology. Existing ASFINAG risk management documents as well as relevant climate risk reports were incorporated. The developed methodology was then tested and validated in practice together with a selected motorway maintenance unit.



APPROACH



In the project, a climate risk analysis was methodologically developed from scratch and tested together with ASFINAG in a proof of concept at a motorway maintenance unit. The focus was on a practical approach and later scalability to ASFINAG's entire road network.

Project initiation and definition of objectives

Mutual clarification of objectives, scope of application, and requirements for a climate risk analysis, taking into account regulatory, strategic, and operational framework conditions.

Development of the methodology

Development of a structured climate risk analysis based on existing ASFINAG risk management documents, national climate reports, and recognized risk management standards.

Definition of risk scenarios

Selection and description of relevant climate risk scenarios, including time horizons, assessment criteria, thresholds, and weightings to ensure comparability.

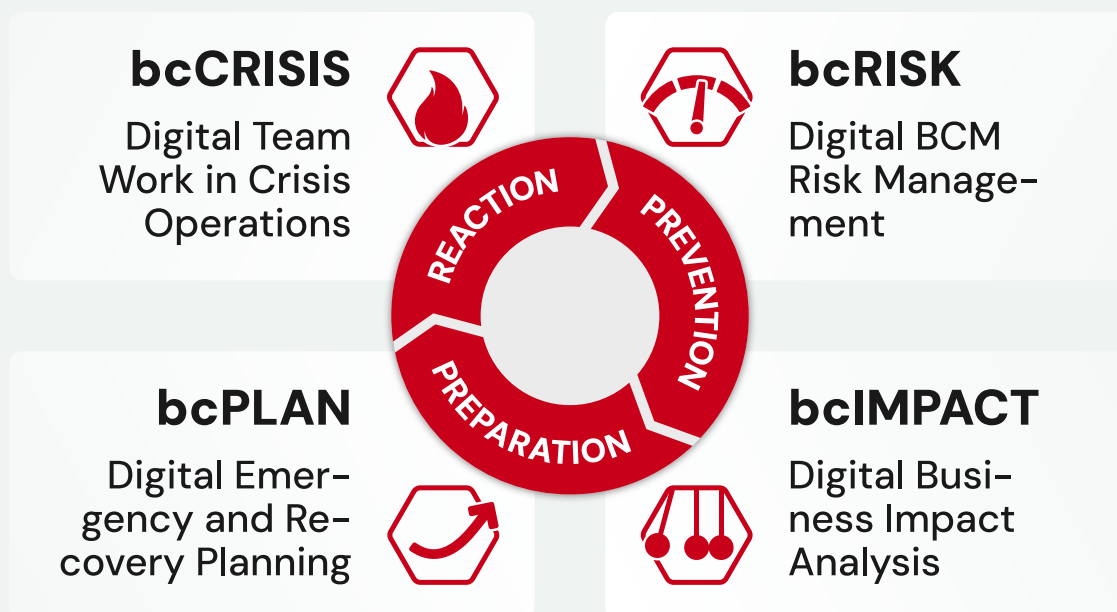
Conducting the proof of concept

Application of the methodology with a selected motorway maintenance unit, including assessment of the scenarios across multiple road sections and time periods.

Analysis and validation of results

Joint evaluation of the results, derivation of insights, and identification of improvement potential for the methodology and the assessment logic.

The climate risk analysis was carried out using the bcRISK module within the BCM tool bcNAVIGATOR. bcRISK supported the structured documentation of scenarios, consistent assessment across all time horizons, derivation of current and future measures, and transparent evaluation and documentation of results.



bcNAVIGATOR is the software solution for the entire BCM process. Our modular software supports you exactly where you need it — modern, intuitive, and audit-proof — so that you can focus on what matters. Modern BCM needs to be digital. Only with the right system support can complex dependencies, processes, and requirements be recorded clearly, maintained, and retrieved in an emergency. At the same time, regulatory requirements are increasing — whether legal obligations, industry-specific standards, or internal compliance guidelines.

CHALLENGES

A key challenge was to make climate-related risks with a long-term horizon methodologically tangible while also making them assessable for operational day-to-day activities. In addition, different experience values, data sources, and existing risk logics had to be brought together consistently. It was also challenging that the absolute risk values were low overall, but changed significantly over the periods considered and therefore had to be interpreted jointly.

- Consolidation of existing risk management approaches with climate risks
- Assessment of long-term risks with limited historical data
- Comparability between different road sections
- Dealing with low absolute risk values
- Derivation of effective future measures

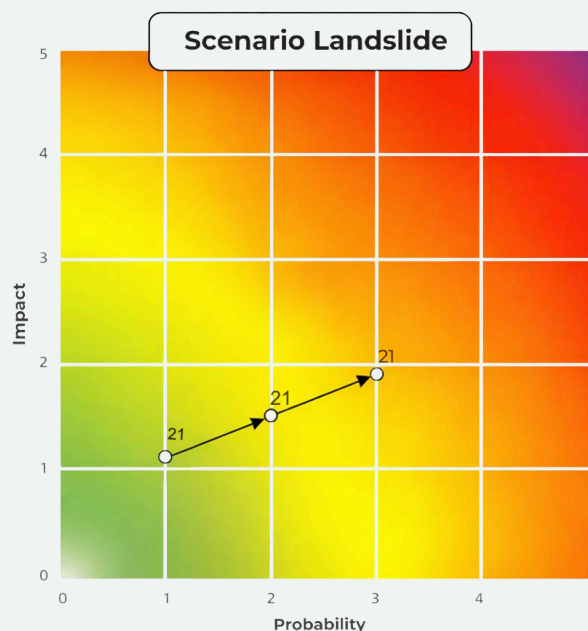
The identified challenges were addressed through close collaboration and translated into valuable insights for further development of the methodology.



FINDINGS

The proof of concept showed that the jointly developed methodology provides a robust basis for the systematic assessment of future climate risks. At the same time, valuable insights were gained to further optimize thresholds, weightings, and scenarios and to make them more practical.

- Consistent scenario descriptions increase comparability and the quality of assessments across different road sections and time periods.
- Currently, climate risks to the infrastructure and its operation are at a low level; however, significant increases must be expected over the coming decades.
- The developed methodology enables consistent assessment of climate-related risks across short-, medium-, and long-term time horizons.
- Applying the methodology proved practical and easy to understand for the operational unit, even in complex infrastructure and climate interdependencies.
- The structured presentation of results supports strategic decisions and creates transparency for management and further expansion stages of the analysis.



SOLUTION



Based on the results of the proof of concept, concrete solution approaches were jointly developed to further refine the climate risk analysis and enable an efficient rollout later on.

Further development of the methodology

Based on the PoC results, thresholds, weightings, and scenario descriptions are further developed in order to represent climate-related changes more consistently, comparably, and transparently.

Structured rollout approach

The gained insights support defining a step-by-step and standardized approach for efficiently applying the climate risk analysis to additional motorway maintenance units in a comparable manner.

Central tool support

With bcRISK, a uniform digital platform was used that enables structured capture, consistent assessment, and transparent evaluation of climate risks across all organizational units.

Derivation of future measures

The analysis results form the basis for the systematic identification and documentation of preventive and adaptive measures, which can be evaluated across scenarios and further developed.

SUMMARY

As part of a joint proof-of-concept for climate risk analysis, a practical methodology compliant with the taxonomy was developed and successfully tested. Close collaboration between ASFINAG and BC Consulting enabled existing risk management approaches, climate reports and operational experience to be effectively combined. The results not only provide transparency regarding climate-related risks but also create a robust basis for strategic decision-making. Based on the insights gained, the climate risk analysis is now being rolled out step by step to other motorway maintenance depots and will be embedded in ASFINAG's risk management in the long term.



"The joint proof of concept has demonstrated how climate-related risks can be assessed in a structured, comparable and forward-looking manner. The developed methodology provides a robust foundation for systematically integrating climate change into ASFINAG's risk management framework and gradually rolling it out across the entire motorway and expressway network."

Heinz-Christian Brünner,

Expert in Process, Project and Crisis Management (PPK), ASFINAG



Inspired by this success story?

Get in touch with us to start your journey toward organizational resilience.

