

# PERFORMANCE HIGHLIGHTS

## ALLPLAN BRIDGE INTERNATIONAL

The Allplan Bridge International module is a complement to several local modules: Allplan Bridge Modeler, Allplan Bridge Pre-stressing, Allplan Bridge Linear Analysis and Allplan Bridge Code-based Design. The International module allows to use the product without any limitation in language and to use all standards for the code dependent calculations and load definitions. There are several code-dependent computations, like considering time dependent material behavior and all the design and check procedures. Furthermore, several templates for load application are available.

### CREEP, SHRINKAGE AND RELAXATION

The time dependent losses of prestressed and/or reinforced concrete structures are one of the main effects that need to be considered in the construction stage analysis. In Allplan Bridge the calculation of creep and shrinkage of concrete and relaxation of pre-stressing steel is code compliant and is available for different international standards (currently for Euronorm and AASHTO LRFD).

### CODE-BASED DESIGN

Allplan Bridge can be used to check prestressed and/or reinforced sections for resistance in flexure. Flexure checks are based on the calculated 3D interaction diagram (surface) intersected with the resulting bending moment vector based on the design normal force. Allplan Bridge can be also used to design the reinforcement content. The design of longitudinal reinforcement uses the defined reinforcement position to calculate the necessary area. Furthermore, the linear elastic stress in relevant fibers of used cross-sections can be also checked. All design procedures are code-based and with international module all future standards (currently only EN) are available.

### LOADS

Additional loads, like temperature change, wind loads, settlement, loads due to braking and acceleration, traffic loads, etc. can be easily defined and applied at any time. These loads are code-dependent and in Allplan Bridge several templates are available. Currently there are templates for LM1, LM3 and centrifugal load according to EN. Especially centrifugal load is applied very comfortable; the user only needs to define the point of the load application and the sum of vertical loads. The product will automatically apply the correct load direction and final load intensity depending on the road curvature. Furthermore, the subdivision of the carriageway into notional lanes is also automatized, the user needs to select only the parametric lines defining the carriageway.

### LANGUAGES

Different GUI languages are available in Allplan Bridge: German, English, Russian, Chinese

