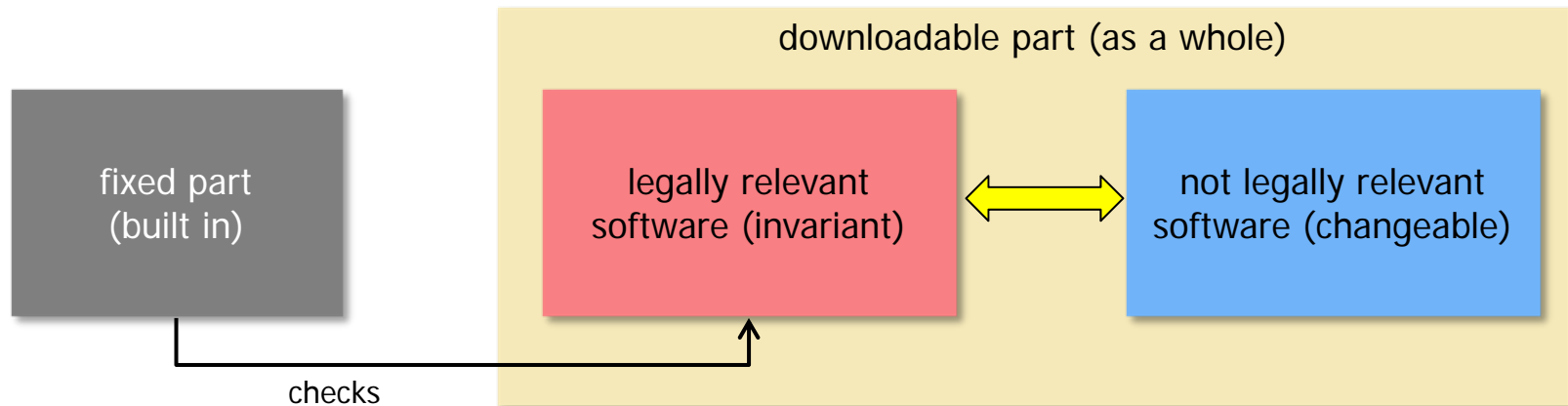Example of an accepted solution for software download in a type P instrument with low level software separation:

The firmware in the device contains a fixed software part (can't be updated in the field) and a downloadable part, which can be upgraded as whole. The downloadable part is divided into the legally relevant software which may not be modified and the not legally relevant software which can be changed. Due to technical restrictions (low level software separation), the legally relevant software needs also to be downloaded if the not legally relevant software is being changed. To avoid an intentional or unintentional change of the legally relevant software, the following solution is possible. In the device a fixed software part is built in which checks the integrity of the legally relevant software after download, i.e. if the checksum and the software ID are identical to the original one. The necessary information is part of the fixed software. If the check fails, the device stops operation and shows a permanent error.