

## Slide 2

There are several “structural performances”. Safety is one of them. Other than safety, serviceability and restorability are also one of the structural performances. For example, even though a bridge is not yet collapsed, if significant deflection occurs in the bridge girders, it affects safety of transportation. You can imagine that vehicles cannot pass the bridge at high speed if it is curved in downward. In this case, the bridge is no longer usable and does not satisfy the serviceability.

Due to the material degradation mainly caused by deteriorations, structural performances are reduced over time. The curves shown in the figure represent the degradation curves of the structural performances. However, we can recover the structural performances as shown in the arrows in the upper direction by conducting repair and strengthening so-called interventions. After the interventions, in general, degradation occurs again, and it is called re-deterioration.

## Slide 4

The flowchart as shown in this slide is called “maintenance cycle”. In this class, details of each process (plan, inspection, evaluation/judgement and intervention) are explained.