

International Bridge Forum

Target inspection of bridges



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Objectives

To detect the indicators of serious degradations incurred by the structure or the users in the core of materials before the disorders are visible on the surface

To include non destructive controls in bridge management and surveillance system in order to allow more efficient preventive maintenance, to increase durability



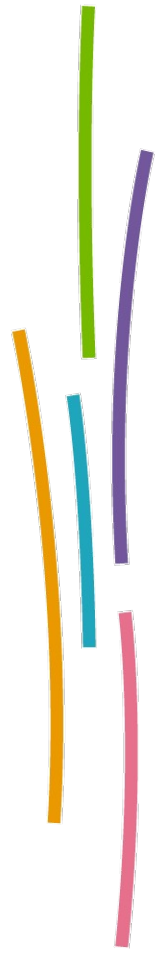
Difficulties

How to determine whether a bridge ages normally or not, before it is in poor condition ?

How to fix the date of the next control ?

We need simple theoretical models for each degradation :

- concrete carbonation
- chlorides ingress
- steel fatigue cracks



Reflection lines

We will work on a sample of bridges
representation of the global population

We will make a risk analysis for each category
of structures

Today, we are looking for calibrating NDT
methods with testing on concrete cores from
the bridges



Critical points on structures

Zones to be inspected with a greater attention where non-destructive tests would be convenient :

Zones of penetration of aggressive agents

Concentration of efforts

Weak protection against water circulations

Causes of risks for users (anchorings of the cornices, of expansion joints, of safety barriers)

