

Successful imitation of reality

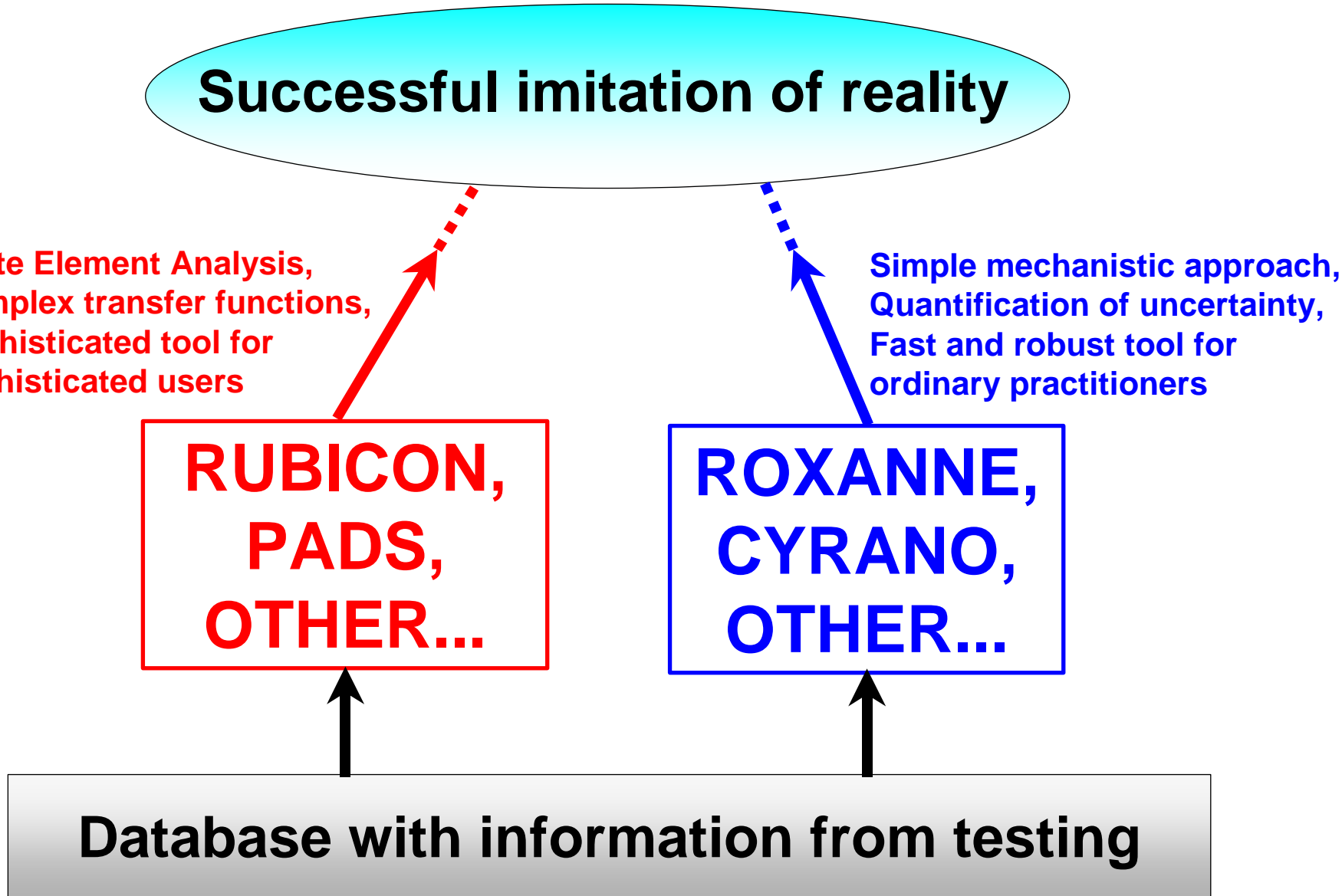
Finite Element Analysis,
Complex transfer functions,
Sophisticated tool for
sophisticated users

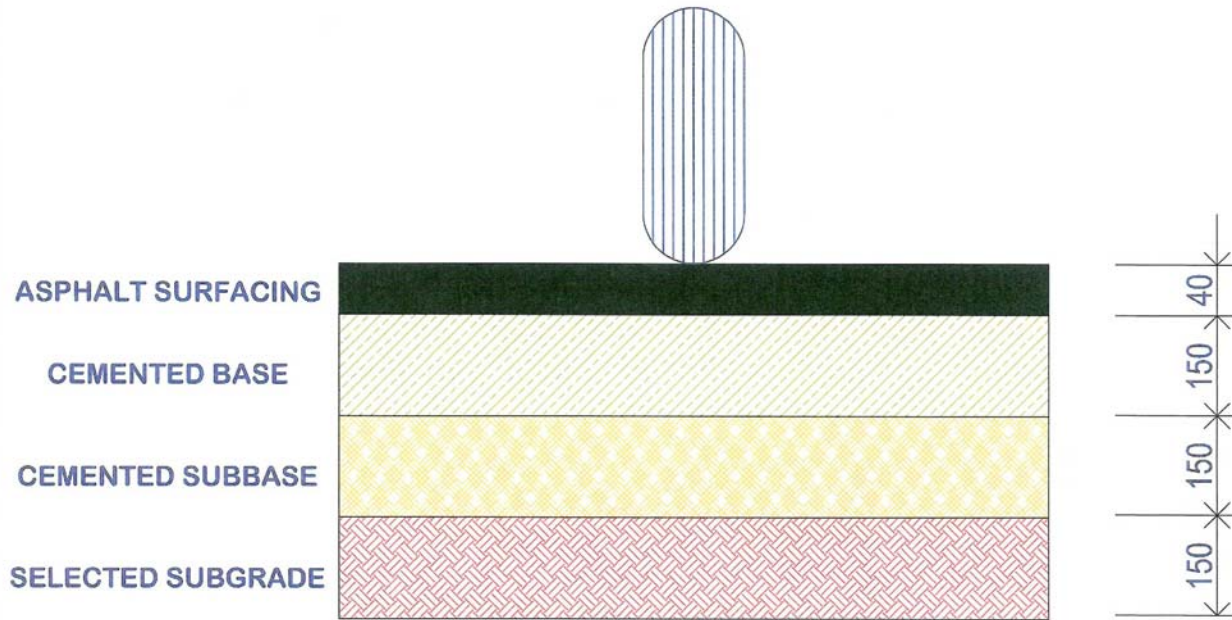
**RUBICON,
PADS,
OTHER...**

Simple mechanistic approach,
Quantification of uncertainty,
Fast and robust tool for
ordinary practitioners

**ROXANNE,
CYRANO,
OTHER...**

Database with information from testing



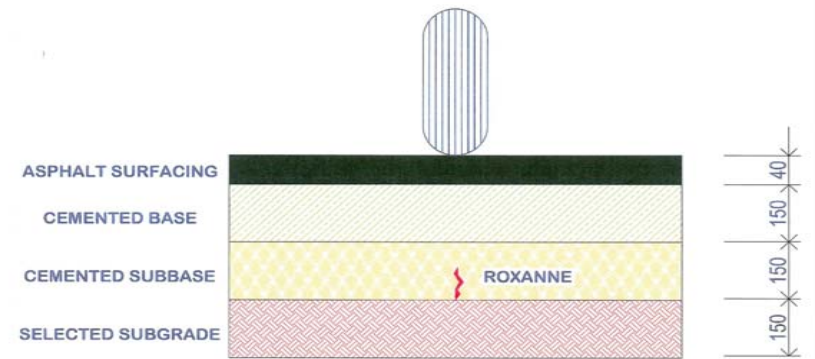


SKETCH 1

TYPICAL FAILURE MECHANISM OF PAVEMENT TYPE

PHASE 1

Subbase fails first in fatigue cracking

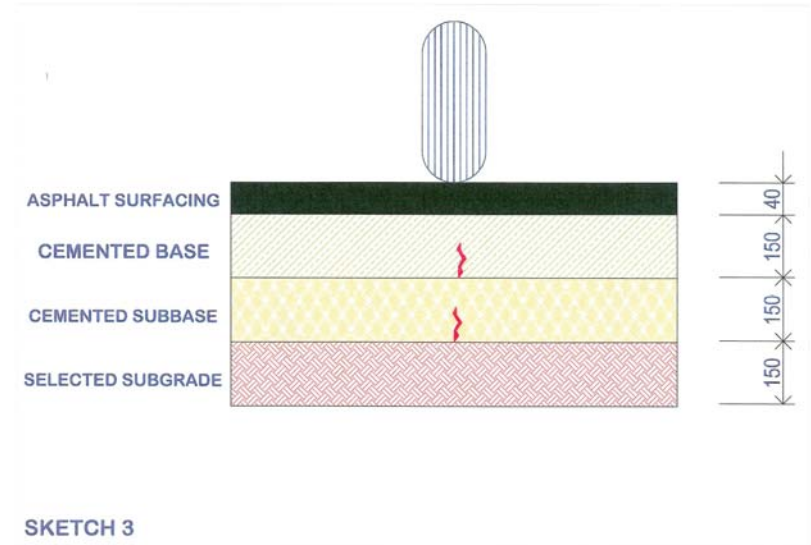


SKETCH 2

TYPICAL FAILURE MECHANISM OF PAVEMENT TYPE

PHASE 2

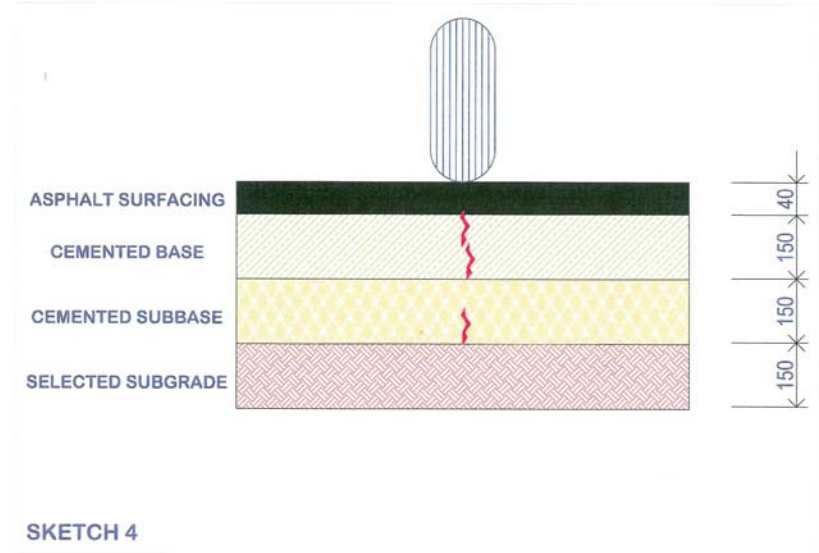
Stiffness of cracked subbase reduces
Critical layer now becomes the base
and the base fails in fatigue cracking
under further traffic loading



TYPICAL FAILURE MECHANISM OF PAVEMENT TYPE

PHASE 3

Stiffness of cracked base reduces
Critical layer now becomes the
asphalt and the asphalt fails in
fatigue cracking under further traffic
loading



MODELLING

Use Roxanne to optimise pavement composition

Use Cyrano to model phases 1, 2 and 3

Stiffness of the cracked layers are reduced gradually and not in steps

Percentage surface area cracked and rut depth are calculated

