

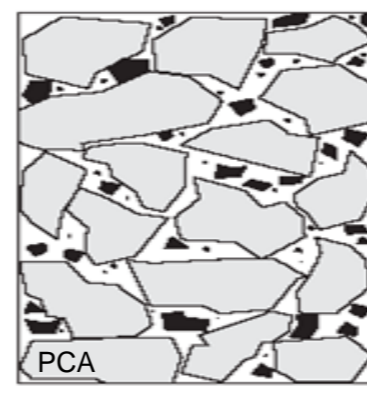
Understanding how the mineral/chemical admixtures influence the fresh properties of advanced concrete systems



Mineral admixtures



Chemical admixtures



Particle Packing



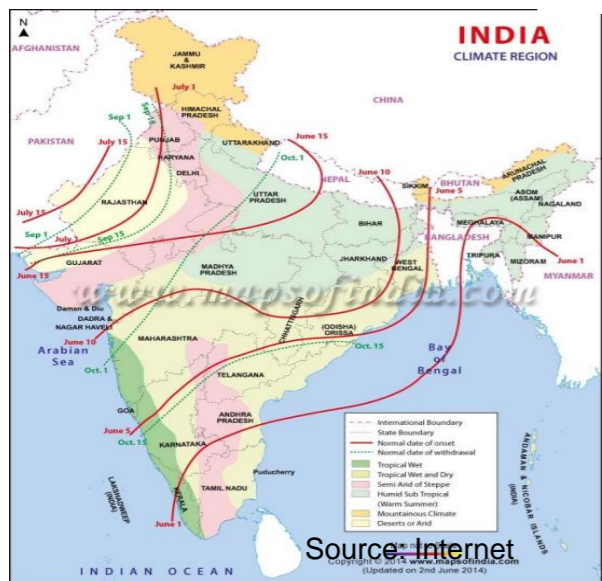
Desired...

Workability

Strength

Durability

Various challenges faced by engineers at site across the country



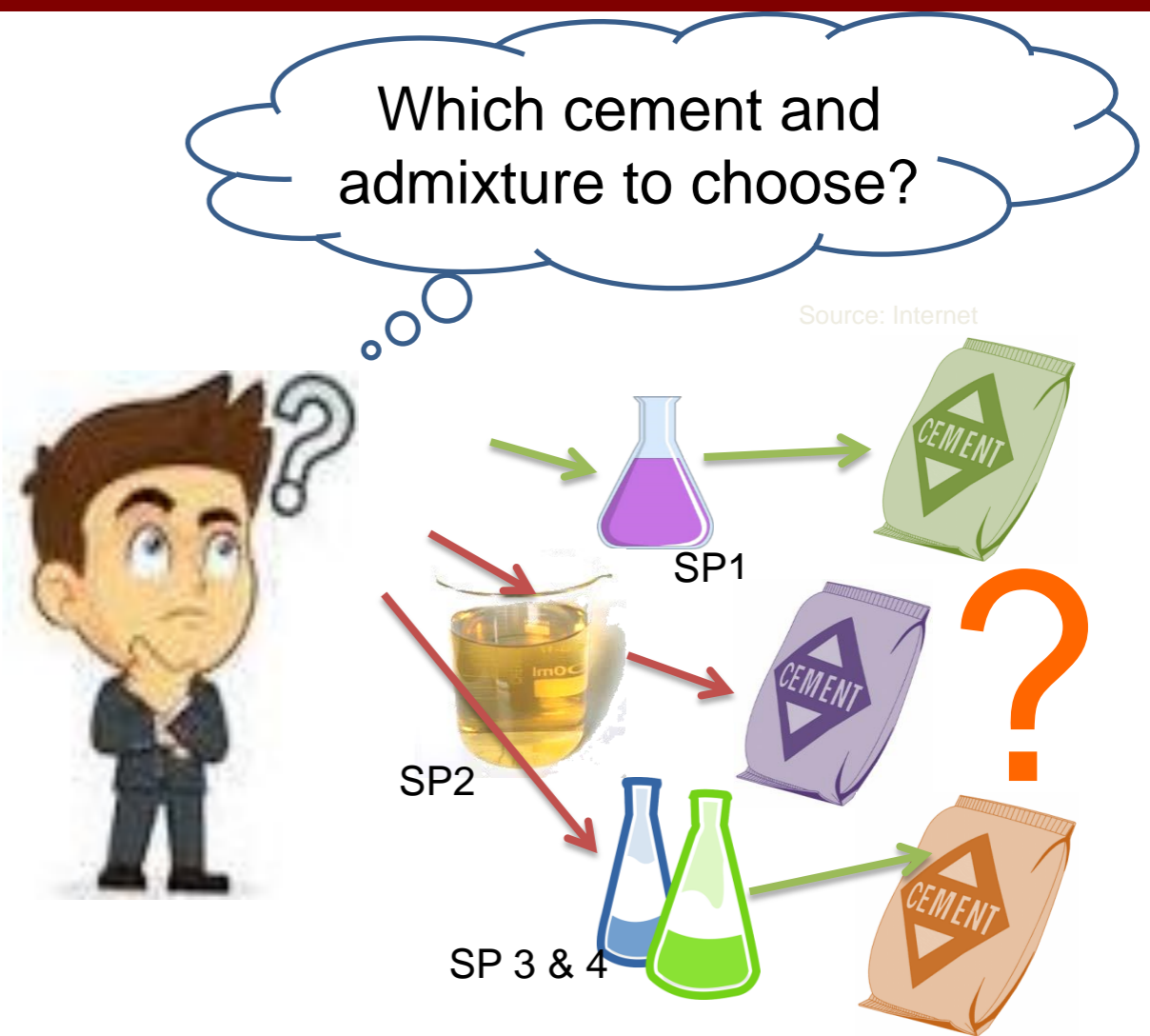
Various climatic conditions



Concrete truck stuck in traffic



Construction during day and/or night



Cement-admixture compatibility issues

Slump test alone is not sufficient to design concrete mixes for these conditions

Advanced Testing facilities available at IIT Madras



Walk-in environmental chamber



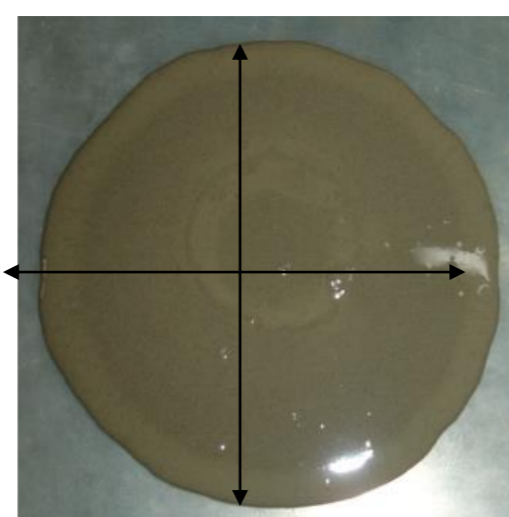
Rheological test setup for cement pastes



Marsh cone test for cement-admixture compatibility



Mini slump test



Understanding the flow and rheological characteristics can help to design concrete mixes for various climatic and site conditions/requirements.