

# **Cloud Connected Ecosystem for NDT Assessment of Concrete Structures**

**David Corbett<sup>1</sup>, Houssame El Ghanami<sup>1</sup>, David Fernandez Haro<sup>1</sup>**

<sup>1</sup>Product Management , Screening Eagle Technologies , Spain

Non-destructive assessment of concrete structures for both new and existing structures requires multiple technologies and varied skillsets. Typically, a visual inspection along with a review of the available documentation is the starting point of any such assessment. The actual measurement tasks can include strength estimation, mapping the rebar structure, detecting and monitoring corrosion and locating subsurface objects and defects. This is a complex operation that requires planning and collaboration between experts in various fields, both on and off site. Modern concrete Imaging systems are improving all the time and combining the various technologies allows a fuller understanding of what is happening inside the structure. It is a great advantage when fully processed images are available immediately without the need for post processing. This allows decisions to be made without delay, or further scans to be made before staff leave the site. Recording the precise location on the structure where any inspections have been carried out is vitally important, especially when it comes to carrying out repairs and monitoring the development of possible weak points. In order to make this feasible we have developed a fully connected ecosystem of sensors for data collection, powerful tablets for on-site visualization, workflow software to plan, trace and generate reports of the entire inspection process and an overarching cloud to bring it all together. Making use of a cloud ecosystem ensures that no data is lost and enables instant collaboration between all concerned parties.