

# **Detectors in Field Radiography: Discussing Advantages and Key Performance Parameters for Portable Industrial Digital Radiography.**

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Radiographic film has long been the go-to recording medium for industrial radiography. However, the introduction of digital radiography in the 2000s revolutionized the industry by offering alternative methods utilizing scintillators, semiconductors, and storage phosphors as recording media. Nowadays, digital radiography has become the most common and accepted method for industrial radiography in fields like manufacturing and aerospace, relegating film to the role of legacy technology for those applications. Despite this shift, it is still common to find film-based radiography as the preferred method in field applications due to its price, reliability and established practices. Since we started as AGFA NDT in 1999, we have consistently developed and released state-of-the-art CR and DDA solutions that facilitate the introduction of digital radiography in field applications. Currently, as Waygate Technologies, our digital detector (DDA) ecosystem is optimized to provide similar ease of use, image quality, and consistency as with traditional analog radiography. Additional benefits like dose efficiency, ease of sharing and reporting add to the success of this latest technology. This conference contribution aims to present a comprehensive analysis of the feasibility of transitioning from film-based radiography to digital radiography for field applications. Our presentation encompasses an introduction to the technology behind our digital detectors, a general overview of the advantages provided by digital systems, and finally an in-depth evaluation of key performance factors, including image quality, cost-effectiveness, workflow efficiency, environmental impact, and safety. Lastly, we will discuss the next generation portable and flexible digital detectors, specifically designed and optimized for field applications in NDT. We will cover their features and benefits, poised to revolutionize the industry. Keywords: Digital Radiography, Digital Detectors, DDA, Field Radiography, Key Performance Parameters, Waygate Technologies