Contribution ID: **280**   Type: **Poster Presentation**

Mitigating Worker Skills Gaps using Digital Workflows & Mixed Reality

Tuesday 7 October 2025 19:48 (1 minute)

The average plant worker's age is increasing while headcount is leaner providing fewer opportunities to transfer knowledge from more to less experienced people. Workflow art, the correct methods to execute tasks, is being lost with retirees and leaner workforces while skill gaps and productivity pressures are increasing. The collection of these workflow arts is sometimes summarized into the term "tribal knowledge". Each day 10,000 skilled workers retire in the USA alone. Unless that knowledge is captured it leaves with them. The European workforce statistics are more worrisome. Workforce demographic shifts of retirees, generational preferences, and other factors including pandemic have accentuated the urgency to bridge the gaps and mitigate loss of tribal knowledge. State-of-art digital workflow systems enable efficient and flexible multi-media capture of tribal knowledge. This presentation will provide a background of digital workflow technology before providing examples of how one system has been used within the metals industry to digitally collect, preserve, and share tribal knowledge. Best practices of how to successfully implement Industry 4.0 technologies will also be discussed.

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Session Classification: Poster Session

Track Classification: Digital tranformation