




# Building on Workers' Knowledge to Enhance Safety and Productivity Among Field Workers

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Worker's knowledge more complex, multi-dimensional and nuanced than conventionally conceived

This complex knowledge base unrecognized and under utilized

A fundamental bridge in human computer interaction



“The system never managed to fully account for the unexpected: for the moment technology fails and humans –a growing population of more than 300,00 airline pilots of variable and unpredictable skills – are required to intervene...

...it was the decisions made by four of these pilots, more than the failure of a single component that led to 346 deaths...”

--William Longeweische

THE PRINCIPLES OF  
SCIENTIFIC MANAGEMENT

BY  
FREDERICK WINSLOW TAYLOR, M.E., Sc.D.  
PAST PRESIDENT OF THE AMERICAN SOCIETY OF  
MECHANICAL ENGINEERS

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1911 FOR CONFIDENTIAL CIRCULATION  
AMONG THE MEMBERS OF THE AMERICAN  
SOCIETY OF MECHANICAL ENGINEERS  
WITH THE COMPLIMENTS OF THE AUTHOR

“Therefore the workman who is best suited to handling pig iron is unable to understand the real science of doing this class of work. He is so stupid that the word ‘percentage’ has no meaning to him, and he must consequently be trained by a man more intelligent than himself.”

--Frederick Taylor, 1911

# Polanyi and Bourdieu's Corrective

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Tacit Knowledge

['tasət] ['näləj]

Habitus

['habədəs]



To be both effective and embraced by workers

Any technology must acknowledge and make integral place for the deep habitus and tacit knowledge of field workers