Yorkshire Miners hold the key to unlock the value of new age technologies?

Over recent decades, various technological waves have taken place – each with much fanfare and publicity. Each, hailing it as the 'silver bullet' for all the problems that projects typically face during delivery. We saw project management software packages that automated processes, such as scheduling, in the 1970s and 1980s; expert decision-making systems in the 1990s; and more recently, the power of data analytics and AI proclaimed as the missing link...When used correctly, these technologies have certainly helped in the management of projects, but improvements in performance have been marginal at best. Problems still persist.
So, where's the silver bullet?

What was missing was the role and involvement of people, which takes us back to the mid-1900s Yorkshire, England, coal mining industry. At that time, the industry had major problems that led to falling productivity.

Its management, believing that mechanisation and new working methods were the panacea, replaced long-standing and traditional coalface practices with bureaucratic methods used in assembly-line factories, such as labour division and specialisation, hierarchical structures and automated work processes. However, the changes were not working, and at many mines, things were even worse than before.

The National Coal Board, which was responsible for the management of the industry, invited staff from the Tavistock Institute in London to investigate. Their research project compared a coal mine that was performing well with a similar one that had major issues, such as low productivity, poor staff morale and labour issues. In the high performing mine, they found that the miners had devised their own way of working – they worked together in groups rather than following the assembly-line approach, had a relatively high degree of autonomy, interchanging roles and regulated their own affairs with a minimum of supervision.

It's all about people, right?

All the features of good relationships between the workmen were present. This resulted in high levels of cooperation and support for each other and individuals working for the benefit of the whole group. What was particularly striking to the staff from Tavistock was that the way of working had much in common with how miners worked prior to mechanisation, when they typically organised themselves into workgroups, and each miner could do all the different jobs at the coalface. This way of working ensured continuity between each shift, and the workgroups were incentivised to work together to maximise their earnings, which they shared equally amongst all group members.

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The takeaway learning from the researchers was that any workplace design should allow for technical aspects (such as mechanisation in the case of coal mines) and, crucially, **how people interact and relate to each other** as social groups, i.e. the workgroups at the coalface. **The 'sociotechnical system'** concept recognises that both social and technical elements must be considered and matched together to achieve the best work arrangements. The concept adds the vital people element to the new technologies highlighted at the beginning of this case. **So yes, the evidence tells us it is all about the people – so how can you use this to mitigate delivery risk and speed up clinical trials?**

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