

## Voltas Al-Futtaim Engineering (VAFE)

Delivering Rapid Productivity Improvements



A joint venture between Voltas Qatar WLL and Al-Futtaim Engineering, the client is the electro-mechanical contractor for Doha Festival City mega-mall project. Founded in 1954, Voltas is India's largest air conditioning company, and a 'preferred EPC contractor' for electro-mechanical projects in some of the world's most demanding markets. Al-Futtaim Engineering is a leading multi-disciplinary engineering company with over 30 years' experience with operations across the Middle East. High profile projects in Qatar include the Burj Al Marina, the Doha Festival City's IKEA and the Heritage Quarter.

"Renoir has more than met our expectations in demonstrated behavioural changes across the entire pilot area in a matter of weeks."

**Nazrul Islam**  
**Deputy Project Director /**  
**Senior Construction Manager**

### Key Results

70% improvement in direct labour productivity against a project target of 35%

A practical and effective process for controlling manpower breaks and shift adherence for over 3000 workers

A systematic methodology for assessing and publishing foreman production results on a daily and weekly basis

### THE PROJECT

At the time of construction, Doha Festival City was the largest mixed-use commercial development under construction in the Middle East, and is Qatar's largest retail and leisure destination. It features the Doha Festival City Mall, a hotel and convention centre.

Doha Festival City Mall, with a gross leasable area of around 250,000 sqm, comprises 550 outlets representing international and local brands, 85 restaurants and cafes, VOX Cinemas and a snow park. The contract, worth over \$137m (QR500m) was awarded to the joint venture to undertake MEP (mechanical, electrical and plumbing) works for the main mall:

### THE ASSESSMENT

The key objective of the assessment phase was to determine the worker productivity gaps in the tenancy shops for activities being carried out by 300 workers (under one Construction Manager) on ground and first floor shops. These gaps identified were:

- Insufficient supervisory presence at work locations. Even when present; they were not generally effective in controlling manpower.
- Manpower tracking focused on attendance; however utilization was very low.
- Targets were not specific enough; only when under pressure to handover are expectations clearly set.
- Delays in starting work and early departures. Lunch breaks started early with late returns.
- Lack of effective supervisory presence made it easy for workers to disappear or sit idle.
- Limited daily planning measures that focused on the required productivity.

The detailed analysis revealed that inefficiencies could be significantly reduced through:

- Increased compliance to shift schedule.
- Improved active supervision and short interval control.

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- Defined and well communicated productivity targets by activity level, and more effective variance control and corrective actions.
- Improved short-interval operational planning, controlling and reporting system.t

### PROJECT APPROACH

The ensuing 10 week “rapid intervention” engagement adopted an approach of monitoring workers’ work based whether they were working or not throughout the shift. This tight monitoring process across the entire pilot area allowed an objective assessment of percentage of people working through the entire shift. Additionally, tools such as shift monitoring processes, tool box meetings and foreman-level key performance indicators were to be developed to measure improvements in productivity during the engagement and to take corrective action to address variances.

To assure the success of the engagement, a project governance structure was set up. This consisted of a Steering Committee, Management Action Team and Task Force. The steering Committee reviewed results and provided direction every two weeks while the Management Action Team met weekly to ensure implementation compliance and delivery of results at the execution level.

### IMPLEMENTATION

Renoir focused its attention on the key potential areas for improving worker productivity i.e. manpower utilisation and production attainment. Due to the rapid nature of this intervention, the team focused their efforts on immediate implementation of the key elements of the management control system that would drive productivity through clear, accurate and achievable daily plans. Productivity was then controlled on site through daily performance reviews, short interval controls, and corrective action mechanisms. The reporting element fostered a corrective action culture at the daily and weekly reviews.

A range of tools was implemented, including:

- Shift monitoring.
- Toolbox meetings.
- Foreman league tables.
- Pass card processes.
- Rigorous shift monitoring audits on shift monitoring sheets (especially during check rounds).

These all resulted into a measurable improvement for the groups in the pilot area.

Much of the time spent by the [joint Renoir/VAFE task force?] was on site. This included intensive hands-on coaching and training in supervisory skills and problem solving as well as in the new management control system elements.

By means of the project governance structure, behavioural improvements were realized, specifically in areas such as shift management, communication, coordination, planning and controlling and target-setting. However – and most importantly – a corrective action environment was created based on management by numbers.

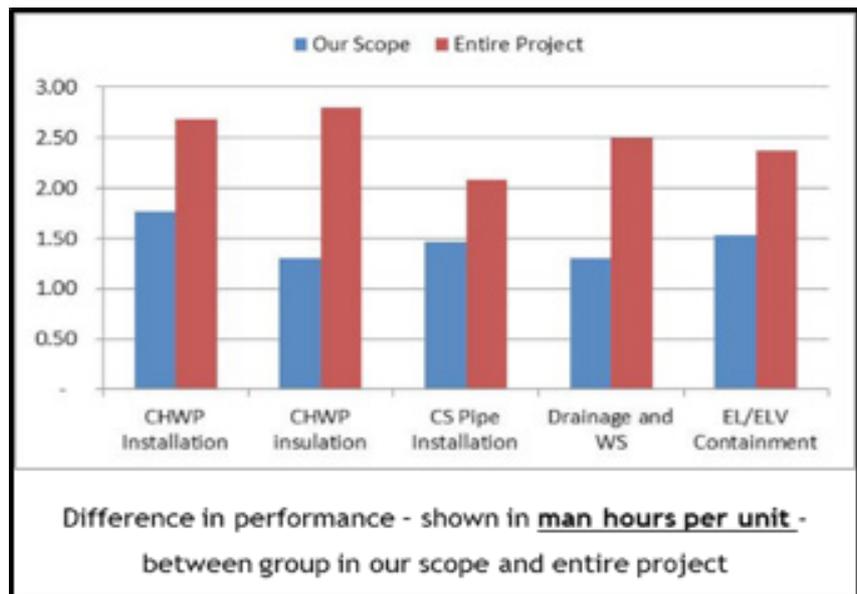
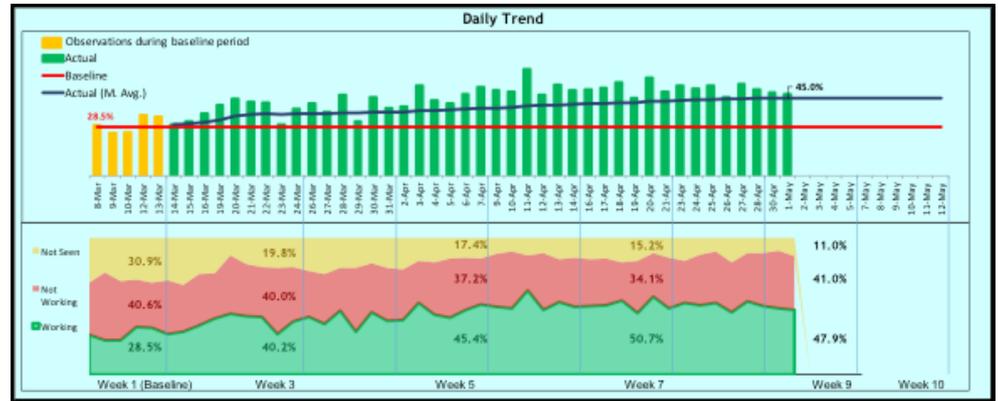
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## RESULTS

An almost immediate improvement in team productivity was achieved. Each audit was supported by improvement oriented coaching which helped foremen to adjust for variances. Positive reinforcement techniques contributed significantly to the improvements.

Worker productivity increased steadily from week 3 onwards, eventually reaching 70% over baseline against a target of 35% as demonstrated by the trends below:



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In a very short time, the engagement delivered a measurable and significant improvement in productivity. In addition, managers, supervisors and foremen are now better equipped in continuing the drive towards the next level of performance.

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