

Increasing Output, Quality and Profitability in Precast Concrete Operations

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Prefabrication with Precast Concrete is the future of construction. All of us are well aware of this fact. Nowadays many investors from different backgrounds look into the technology in order to participate in the current and upcoming demand for low cost and high-quality construction of all kinds of buildings. However, many of those who have invested into modern technology are not satisfied with the results - often such high value facilities do not generate the output they should. The reasons for deficiencies are manifold and require detailed investigation.

Due to lack of experience, investors for precast production equipment are often trying to investigate and find the correct choice of equipment by themselves. This can lead to a setup that is not optimized for its purpose and typically to under-performance of the chosen equipment and thereby to reduced economic output - sometimes even far below the figures indicated by the suppliers or advisors.

A simple comparison for the successful investment into automated Precast Concrete technology can be presented as follows:

1. Buy an Airplane
2. Fly an Airplane
3. Operate an Airline successfully

It is no simple task at all to reach stage 3 of an "Airline" or Precast Concrete Operation and many bits and pieces have to be considered and come together to turn an investment into a profitable one. A brief overview can demonstrate how good operational consultancy pays off quickly.

The horse has already left the barn

After the start of regular production, typically the investment budget is consumed or even overrun and yet the operations are not generating the required funds to sustain the newly set up enterprise. This of course is a very difficult situation which often triggers a damage control mode on management level in order to reduce costs and thereby decrease losses. This however, can turn things to the worse if not done systematically.

In this situation, an in-depth analysis by external and independent experts is required. The status quo needs to be in-

vestigated on all levels - from business planning over design and production up to administration and controlling in order to find the right mix of measures to bring the financial performance to profitable levels.

Finding the way out

All areas of the operation require investigation. In most cases the poor financial outcome results from multiple sources and therefore need to be approached on all levels simultaneously. Zones to be focused on are the following:

- Business Plan and Financial Model
- Organizational Structure
- Administrative processes
- Procurement Strategy
- Raw materials and Concrete technology
- HR - quality of employees
- Production Processes and utilization of machinery and equipment
- Quality Control and Assurance

Operational Concept

Out of the collected data a detailed Operational Concept is generated. Basically, a manual for the complete enterprise, tailor-made to the specific needs in the local market. Work Flows for all departments and Standard Operational Procedures (SOP) are developed to ensure that all processes are being followed strictly but with enough flexibility to cater for all potential possibilities.

KPI are being defined to enable timely and efficient controlling in order to give the management the required tools to steer the operations independently.

Implementation & Training

All processes and procedures are being implemented and trained on all levels - from shop floor and administration up to management.

The training focusses not only on manufacturing processes but also on quality management and assurance, concrete technology and handling of finished products.



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All in all, the complete knowledge transfer of business specifics enabling the complete team to run the Precast Operation efficiently and profitably.

Real Case Figures

The graphs in Figs 1+2 show before & after results in a circulation plant for element slabs and solid walls. Measures taken aside of Operational Concept and Training were:

- Reduction of manpower in production
- Reorganization of technical office
- Change of raw materials and mix design
- KPI & Dashboard implementation

After implementation of all measures the immediate effect was an increase in productivity by more than 20% in the first month. Continual monitoring and training over the following 4 months brought the complete operations into the profit zone. After 6 months' production efficiency went beyond the capacity indicated by the suppliers, and forecast shows high profitability based on market projection.

Aside of increasing revenues and profits also the product quality improved substantially and thereby cost of manufacturing could be further reduced due to less repair and extra handling.

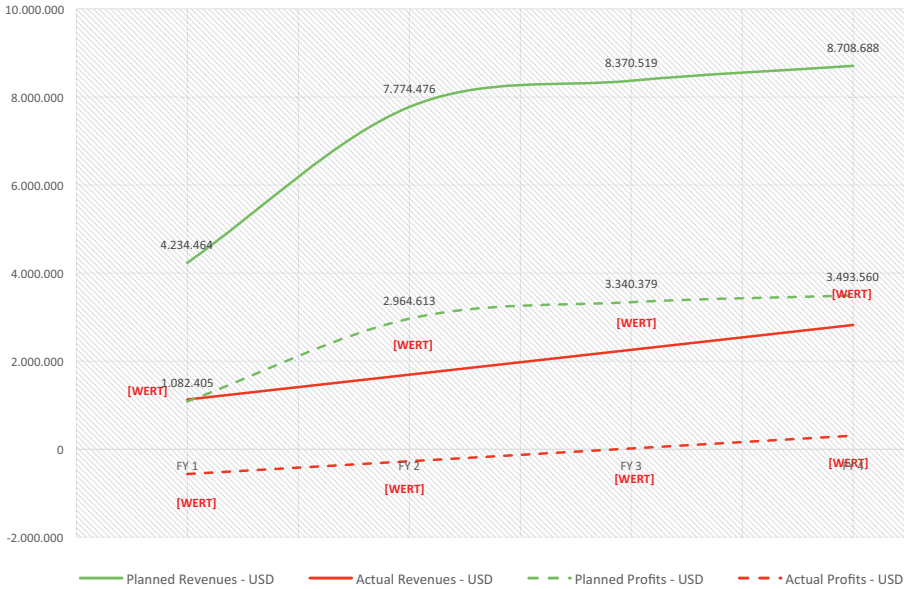
Clients are more satisfied with the products due to short delivery times and good quality. The complete cost of consultancy was recovered after 6 months from implementation. ■

FURTHER INFORMATION



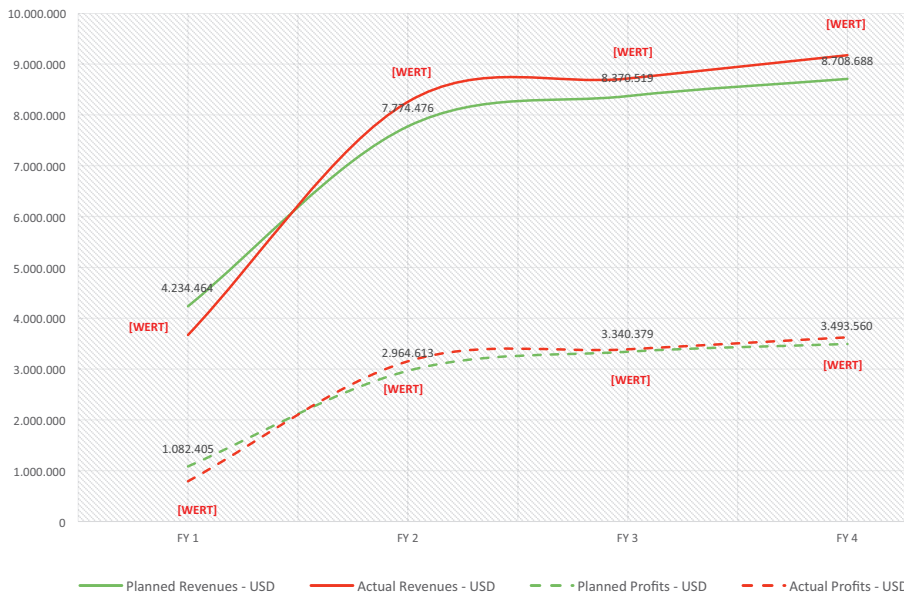
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Planned versus Actual



Planned vs. Actual P&L (4-Year F-Model) at Fact Finding state

Planned versus Actual



Planned vs. Actual P&L (4-Year F-Model) after Implementation