

**Turnkey Solution for Operation and Maintenance  
for Cement Plant, Virinchi Infratech**

**Concept:**

The basic principle of Operation & Maintenance (O&M) is that Plant Owner contracts us to operate and maintain their plant. In doing so, we guarantee their output levels for an agreed price per tonne. Our fee is performance-based. All they have to do is account for certain basic provisions (fuel, raw materials, power) and let us take responsibility for the plant performance.

In this way, plant owner can convert their variable costs to fixed costs per tonne. They will only be charged according to our performance. Our performance guarantees will enable owner to make educated decisions and plan ahead, particularly with regard to related aspects of the business.

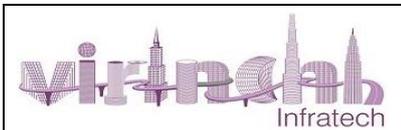
When the O&M contract expires, the plant will be returned in optimal working condition, including a competent, engaged and organized workforce, all the required computer hardware and software, as well as tools and equipment used for operating the plant.

**Sharing responsibility and risk:**

In order to work effectively with outsourcing, it is important to clearly define expectations and responsibilities upfront. At VIRINCHI, we have no ambitions to become the plant owners. As such, we take no financial stake or holdings in the plants we operate. Our contribution and scope of responsibility is contained to the efficient running and professional upkeep of a facility.

Risk sharing between VIRINCHI and the customer is based on a rational division of responsibility. VIRINCHI's responsibility is contained to risks within its control, i.e. the efficient running and professional upkeep of a facility. The plant owner accounts for fundamental supply issues for example, power, water, fuel and raw materials. In addition, all capital investments in machinery and property are the responsibility of the plant owner. However, we help define specifications and make recommendations where and when necessary. By limiting our role to operational and maintenance support, we also ensure there is no conflict of interest between our customers and ourselves.

<b>An example of the division of responsibility</b>	<b>VIRINCHI</b>	<b>OWNER</b>
<b>Raw Materials</b>		▲
<b>Operations</b>	▲	
<b>Plant Maintenance</b>	▲	
<b>Technical Management</b>	▲	
<b>Employees (recruitment, payroll and management)</b>	▲	
<b>Training and development of local staff</b>	▲	
<b>Unskilled labours</b>		▲
<b>Office, warehouse and canteen facilities</b>		▲
<b>Office equipment (incl. computer hardware and software)</b>		▲



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<b>An example of the division of responsibility</b>	<b>VIRINCHI</b>	<b>OWNER</b>
<b>Office furniture</b>		▲
<b>Personnel safety equipment</b>	▲	
<b>Consumables and operating spare parts(on-going consumption) (for non-critical item)</b>	▲	
<b>Utilities (Power, fuel and water)</b>		▲
<b>Security (Guards, equipment, fencing etc)</b>		▲
<b>Plant, Property, Liability and equipment insurance</b>		▲
<b>First aid equipment</b>	▲	

**3 Possible Models:**

**1. Design-Build-Operate (DBO): PMC+ O&M Approach**

VIRINCHI's DBO model lets us support our partners throughout the process of establishing a new cement plant and beyond. Best-practice routines ensure projects are carried out on time and within budget, with a clear allocation of responsibility and risk.

**2. Design-Upgrade-Operate (DUO)**

If client owns an older plant, and they would like to produce at a higher production level, we come in, design a tailor-made upgrade for your existing plant and operate and maintain your plant.

**3. Due Diligence-Operate (DDO)**

if client is having an older plant and want to maximize its performance we come in audit your plant and then operate and maintain it.

**Flexible collaboration solutions**

An O&M contract with us includes flexible managing solutions to suit client's particular needs. A typical contract has duration of five years.

O&M Plant Management	We take care of filing management positions of the plant
	We implement our quality and control system on plant's operation and maintenance to achieve desired result
O&M Technical Management	In addition to the above all key personnel for the different functional areas are outsourced
O&M Total Outsourcing	In addition to the above, we deliver the complete staff for running the entire plant.



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### **High performing organization**

O&M is all about people and we aim to attract the best employees on all levels. We are highly engaged in the local community and want to recruit the majority of the work staff locally. With clear tasks, expectations and responsibilities for every employee, and benchmarking internally, as well as externally, we are able to establish an engaged and dedicated performance culture.

### **How O&M boosts performance**

- Rapid start-up
- Maximized output
- High-quality cement
- Increased plant value
- Global resource base
- High energy efficiency
- Extended plant lifetime
- Higher intellectual capital
- Fastest return on investment

### **Health & Safety program principles**

Safety is one of our main priorities, and the safety program is developed to create healthy and safe working conditions for our employees.

We develop safety programs to ensure that the plant staff responsible for safety fits the qualifications and necessary requirements. To constantly reach those requirements and qualifications, training is offered and evaluations are made on a regular basis. To find the best fitted safety program we start by identifying, assessing and quantifying possible future risks and areas of hazards. Then the appropriate control and safety program is implemented as well as a follow up procedure after implementation.

### **Health & Safety program focus**

- Organization and planning
- Risk control
- Training and awareness
- Continuous improvement

Since each working areas and tasks have different conditions and level of difficulty, safety procedures are developed for each area:

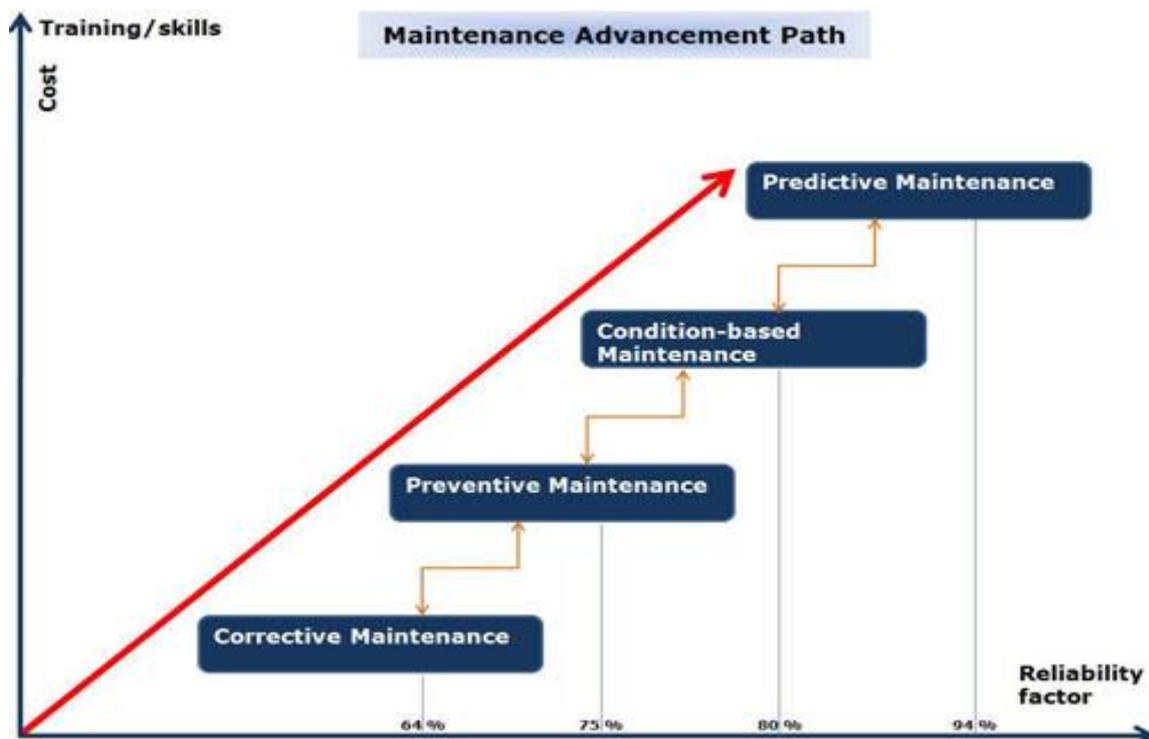
- Work in confined spaces or height
- Work next to machinery
- Inspection of pressure plant and valves
- Safety concerns regarding high temperatures
- Working at heights
- Covering and fencing of dangerous spaces and areas
- Safety measures relating to explosives or flammable gas

Finally, to enhance safety, sufficient and adequate first aid stations and lighting are available and the correct safety equipment are provided (personal protective equipment, firefighting).

**Maintenance best practices**

Our O&M ambition is to maintain high and sustainable production levels throughout the year. A precondition for this is to perform maintenance activities at the highest possible level.

The VIRINCHI way to increased efficiency follows the "maintenance path" (described in graph below) of advanced maintenance practices.



The different maintenance practices are individual techniques which build on each other. Their relationships are top to bottom dependencies, meaning Predictive Maintenance is dependent on Condition-based Maintenance, which in turn is dependent on Preventive Maintenance and Corrective Maintenance. The maintenance dependency is never the other way around. Corrective Maintenance is the very minimal maintenance and does not depend on each of the maintenance practices which VIRINCHI applies: Preventive Maintenance, Condition-based Maintenance and Predictive Maintenance.