

	<b>Operational Excellence: Journey to Create Sustainable Value</b>	Doc. No.	10-13-0005
		Date	07/06/2017
		Rev. No.	00

## 1.0 CAGROW'S OPERATIONAL EXCELLENCE MODEL

Our Operational Excellence system of service is based on 4 "Foundation Blocks" each with a set of elements:

- Asset Design
- Asset Management
- Asset Value
- Asset Risk

The foundation blocks are complemented by 4 "Enablers":

- Leadership and Cross-Functional Alignment
- Policies, Processes, Procedures and Systems
- Corporate Culture
- Customer Focus

Each of these foundation blocks contains a number of specific elements, 25 in all, that we apply to client's situation as necessary. We have integrated comprehensive tools and framework for implementation of each of these elements.

Following assessment/interviews/site visit, a business case is developed for improvement. This becomes the platform for launching improvement teams and leads to the development of a plan for sustaining the gains and continuous improvement. While it is preferable to carry out a global review involving all elements, selective elements may be chosen for study per client request.

Once the program is agreed upon & launched, it results in a culture of excellence in the company with multiple benefits. The culture of excellence:

- is a long journey with many steps starting with few success stories and gradually gripping the whole organisation. A momentum is created where nothing but the best satisfied employees who start taking pride in being the best in business.
- produces a learning environment where people continuously develop skills keeping up with the latest trends in industry. Challenging status quo and constant search for improvement are pursued & valued.
- is a flexible environment where each employee is willing to change as needed. The culture is stable in vision, mission and values but elastic in structure and operations. It is focused on external adaptation and internal operations, satisfying customers and employees simultaneously.
- shows as high self-confidence in employees who seem willing to take up seemingly impossible tasks for execution without hesitation
- is characterized by "success" becoming a habit

## 2.0 READINESS FOR OPERATIONAL EXCELLENCE

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An assessment survey will be carried out to find out the readiness of any organization for implementation of Operational Excellence.


### 3.0 OPERATIONAL EXCELLENCE SCORECARD

All elements and enablers shall be rated on a scale of 1 – 10 during assessment. An improvement plan shall be prepared accordingly for implementation.

### 4.0 OPERATIONAL EXCELLENCE MODEL

Our operational excellence model at a glance is as follows:

<b>Asset Operational Excellence System</b>			
<b>Asset Design</b>	<b>Asset Management</b>	<b>Asset Value</b>	<b>Asset Risk</b>
Design / Capacity / Process / Automation	Business Strategy and Long Term Plans	Performance Management System, Management Reviews	HSE System / Regulatory Compliance
Product Quality, Storage and Delivery	Operational Philosophy, Procedures and Efficiency	Reliability Analysis	Work Authorization / Permit to Work System
Debottlenecking / New Project / Start-up & Handover	Maintenance Strategy / Planning / Productivity / Enterprise Resource Planning (ERP) System	Production and Maintenance Costs	Risk Assessment Process
	Integrity Management / Compliance Assurance	Facility Aging / Obsolescence / Re-certification / Sustainability	Process Safety / Safe Operation / Equipment Protection Systems
	Production Opportunity Losses / Root Cause Analysis	Use of Outsourcing / Contractor Effectiveness	Emergency Response Preparedness / Asset Security
	Energy Management	Continuous Improvement / Benchmarking	Management of Change
	Inventory Management		Information Management and Document Control
	Knowledge Management / Organizational Learning		Personal Competence and Training

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Total = 3 elements	Total = 8 elements	Total = 6 elements	Total = 8 elements
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## 5.0 ENABLERS OF OPERATIONAL EXCELLENCE SYSTEM

The enablers are very critical to the implementation of an operational management system. They make the operational excellence system part of company DNA.

### 5.1 Leadership and Internal Alignment

Leadership is the single largest factor for success in OE. Leaders establish the vision and set objectives that challenge the organization to achieve world-class results making sure the message is cascaded to all levels. Leadership directs the Management System Process, setting priorities and monitoring progress on plans that focus on the highest-impact items. Leaders visibly demonstrate their commitment through personal engagement with the workforce and by showing concern for the health and safety of every individual. They work to help ensure that the OEMS processes and standards are put in place and functioning to satisfy all OE Expectations, and that resources, roles, responsibilities and accountabilities are fully aligned throughout the organization. They demonstrate the same commitment to protecting the environment and process safety risk mitigation.

Leaders should be focused not only on getting results but getting results the right way and behaving in accordance with the corporate values. They are accountable for running the OEMS and enabling and delivering OE performance. By their actions, leaders cascade, manage and drive execution; reinforce the OE culture; instil operational discipline and work to ensure that they and the entire workforce comply with OE requirements. Leaders should determine which requirements and behaviours apply to their specific organizational roles and take action to integrate them into routine duties. All leaders demonstrate operational discipline by shaping their own behaviours and directing, monitoring and shaping the behaviours of the workforce they support.

Operational discipline means completing every task, the right way, every time. It is achieved through leaders who instil operational discipline and a workforce that complies with OE requirements. Leaders set expectations and monitor and shape behaviours. The entire workforce, including leaders, recognizes hazards and follows procedures, management of change and stop work authority appropriately. This implies that the workforce has:

- Information regarding what is required
- Knowledge and skills
- Necessary resources
- Unwavering commitment to operational discipline

The workforce, including leaders, demonstrate compliance with OE requirements by always following required practices or procedures or employing appropriate means for deviating or stopping work as necessary. This implies:

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- Follow required practices and procedures
- Use management of change processes for deviations
- Recognize potential hazards and unusual circumstances
- Maintain a healthy sense of vulnerability
- Observe co-worker behaviours and provide feedback
- Stop work when necessary
- Use the Tenets of Operation to guide daily decisions
- Modify personal behaviour to prevent losses or incidents
- Report and investigate near misses, losses and incidents
- Ask questions, share and apply learning
- Improve and maintain competency

## 5.2 Policies, Processes, Procedures and Systems

There is a systematic way to drive progress towards world class performance. Driven by leadership it integrates vision, objectives, plans and activities into daily operations through policy declarations, the use of credible systems, process mapping and developing procedures in an integrated manner. The first step is an affirmation of management commitment through the formal issuance of respective management policies. These policies summarize the intent, broad scope and commitment of resources. Once this is done, policies should be communicated to all concerned and work undertaken to develop systems and map work processes according to the chosen organizational strategies. In this work the intent, scope, ownership, Input/output, and KPIs should be elaborated. Systems developed for different functions should be complementary and not contradicting and reflect the overall corporate objectives. The process design should give the company its competitive edge. The specific steps in the process may be completed in different functional areas and need to be drawn & mapped in a way that the employees understand interaction. Effective communication and collaboration away the departments are essential to the smooth execution of the process without which the process can't be completed efficient and effectively.

Management systems and processes should be designed and managed to optimize shareholder value keeping the following in consideration:

- The process design should be risk based
- Systems should reflect best practices and standards
- Process to be managed end-to-end with boundaries clearly defined
- System and process owners understand their roles and available resources
- Use data on current performance and capability of the process as well as benchmarks to drive creativity and innovation
- A system of corporate OE audit to be put in place to evaluate design and effectiveness

Developing a suite of procedures helps elaborating and standardizing work for executors. Once developed procedures should be treated as living documents to be reviewed periodically.

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### 5.3 Culture

Organization culture is the set of shared beliefs, values, and norms that influence the way members think, feel and behave. Culture is created by means of terminal and instrumental values, heroes, rites and rituals, and communication networks. The primary methods of maintaining organizational culture is through the socialization process by which individuals learn the values, expected behaviours, and social knowledge necessary to assume their roles in the organization.

Every organization has a culture that can have a significant influence on the attitudes and behaviours of organization embers. The competencies and values of employees and leaders play a key role in determining the effectiveness and success of an organization.

Culture is one of the biggest determinants of how employees behave. Strong cultures have two common elements: there is a high level of agreement about what is valued, and a high level of intensity with regard to those values.

Leaders demonstrate that operational excellence is a personal core value and they are equally committed to process safety risk mitigation, environmental protection and achieving world-class reliability and efficiency. Leaders understand and role model the Tenets of Operation and behaviours necessary to build and sustain an OE culture. They continuously improve OE culture by understanding the gaps and removing barriers to world-class OE performance.

- Role model behaviours and tenets
- Show concern for individuals and the environment
- Work to ensure open and effective communication
- Foster mutual trust
- Demonstrate process safety behaviours
- Understand and communicate hazards
- Work to ensure direct reports are trained and qualified
- Show support for OE processes
- Drive continual improvement of practices and procedures

Without a supporting culture, OE is difficult to implement.

### 5.4 Customer Focus

For business sustainability, customer focus is of utmost importance. There can be no business without a customer. Without considering the customer as a vital stakeholder and using his inputs to drive business and OE, desired results will not be achieved. In this context, following considerations are important:

- Customer management strategy
- Use of “Blue Ocean” Strategy
- Customer relationship and feedback
- Customer satisfaction