

**Name of article:** Towards Sustainable Project Management



**By**

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**Sustainable development** is termed as development that meets the needs of the present but does not compromise the abilities of future generations to meet their needs.

It needs to be said that **Gap analysis for Sustainable Project Management** can help the apparels industry achieve this vision.

More importantly as the apparels industry is one where conformance to quality practices is a must for productivity, gaining credibility and building business, managing projects effectively right through the design-to-production and supply chain cycle is very much the need of the hour.

This article uncovers the subject of Sustainable Project Management.



### **A. What is being sustainable?**

**Reducing energy use, unnecessary water consumption, waste generation, operating risks and costs; getting ahead of the regulatory curve; enhancing the environment for operations** and also improving an “organization’s standing in the community”.

These goals and initiatives are mainly part of a vision for sustainability that develops a strategic framework that unifies everyone around the aim to **optimize benefits in three realms**: the environment, the economic, and the social—also known as the triple bottom line.



## **B. Excellence in the apparels industry (revisited)**

For the apparels industry, the need for excellence is not only seen at the **macroscopic level (i.e. business model level)** but also at the **microscopic level (per apparel or product level)**.

This article states that **key performance indicators demonstrative of such excellence** include some of the following:

- a. Reduced raw material/resource use
- b. Reduced energy consumption
- c. Improved process efficiency
- d. Safer for the consumer and community products
- e. Reduced waste generation and disposal costs
- f. Utilization of recoverable resources
- g. Sustainable services

This article reinstates that there are **several pain points** that an organization will need to address to achieve continual excellence.

### **C. Common pain points that occur in operational performance**

The **common pain points** in operational performance (which are mostly because infrastructure elements are afflicted by emerging demands) are as follows:

1. Increasing operations and maintenance costs for facilities
2. High electric power costs
3. Worsening power grid problems such as power quality and availability
4. Possible water shortages, and waste water disposal issues
5. Need to control waste generated via proper eco-friendly and conservative approaches
6. Pressure and responsibility to control utilization and reduce causative effect of harmful chemicals, and criteria pollutants
7. Growing concern about the aspect of Global warming and unprecedented climate change
8. Need to acknowledge environmental safety related product declarations
9. Health and productivity of employees and staff
10. Related need for risk mitigation and disaster management
11. Demand / supply dynamics (often highlighted by e-Commerce trends, changing volume and price levels)

Managing such pain points requires the **adoption of an organizational culture**, where satisfactory leadership, strategy development, intelligent management systems, provisioned resources and sustainable processes work together to produce results.

**Making Project Management methodologies sustainable** is one such stepping stone in developing this organizational culture.



#### **D. Some reflections on Sustainable Project Management**

1. Organizations must make an effort to not only achieve appreciation in human knowledge and man-made capital in their product development, but must also control and limit the depreciation to the natural capital (the environment).
2. Assessment of per capita consumption of resources (buildings, fossil fuels, electricity, water, other forms of energy, different kinds of equipment, raw materials, paper, food etc) must no longer be confined to specific businesses or individuals, but must become an important indicator for product development, service management or project management in all IT organizations.
3. Organizations must conduct periodic Lifecycle Analysis of the facilities being used to manufacture or deliver projects for solutions, products, applications and services. This responsibility is no longer limited to a construction company or the facility management company, but is vital for businesses and occupants using these facilities.
4. Organizations must define a new I-catalog synergy in all projects, where this (Global inference based synergy or Green Product Culture) is conceptualized by a need for every project to conform to certain world-wide accepted practices for each aspect of being accessible, accountable, acceptable, affordable, safe and sustainable. The next article in this series will focus on Green Product Culture.

5. To incorporate this global inference based synergy in projects and Green Product Culture in products, AOEC states that organizations must design a Predictive Lifetime Model for projects based on strategic involvement such as Definition of a LCIA profile, Conservation, Planning, Enabling or Constraining, Monitoring and/or Controlling, and Commissioning for sustainability.

## **E. An overview of the Predictive Lifetime Model for projects**

### **Step 1: Defining a LCIA profile for the project**

It is a profile that captures different details of the organization and uses them to identify the need for standards. It is divided into different sections like the following:

1. Understanding the organization and its business model
2. Benefits analysis to justify the need for a Lifetime model (which can integrate Systemic State Control into the organization for environmental & economic components of sustainable development and the triple bottom line)
3. Development of Autonomic Periphery Building services, where different industry standards are selected to be implemented according to a Plan-Do-Check-Act (PDCA) cycle
4. Dependency on different assessment tools (where the dependency is recorded to help lifecycle assessment).

The author's "Gap analysis toolkit" contains information about all this. If this subject is of interest you can place your order for the same.

## **Conducting of Lifecycle Cost Analysis (LCCA) for a project**

### **a. Who are generally involved in Lifecycle Cost Analysis?**

The CEO, CFO, COO, project stakeholders, project architects, project managers & specialists, project engineers, scope and lifecycle control surveyors, operations management teams & researchers, and others involved in sustainable project management practices.

### **b. When is the best time to perform Lifecycle Cost Analysis?**

LCCA should be performed early in the design process while there is still a chance to refine the design to ensure both (1) sustainable project management practices and (2) a reduction in lifecycle costs (LCC).

### **c. What are the various project lifecycle costs?**

(1) Initial Costs—Purchase, Acquisition, Construction, Commissioning, Facility infrastructure, Customization or Renovation Costs, Technology Acquisition Costs and Building of Human Capital Costs

(2) Project delivery specific Technology utilization and Human Capital Costs

(3) Project delivery specific Energy, Water and Fuel Costs

(4) Project delivery specific Waste management Costs

(5) Project delivery specific Operation, Maintenance, and Repair Costs

(6) Project delivery specific Replacement Costs

(7) Project delivery specific Residual Values - Resale or Salvage Values or Disposal Costs

(8) Project delivery specific Finance Charges - Loan Interest Payments

(9) Project delivery specific Non-Monetary Benefits or Costs, where benefits are more in terms of comfort levels, health, productivity etc

### **How is uncertainty controlled in the Lifecycle Cost Analysis?**

LCCAs are usually performed early in the design process when only charters, or estimates of costs and savings are available, rather than well-known amounts. Uncertainty in the definition of influencers or input values means that actual outcomes may differ from estimated outcomes.

This makes it important for organizations to control the uncertainty in the Lifecycle Cost Analysis for a project. The next section provides an overview on how this can be done.

### **Uncertainty can be controlled by the following techniques:**

(a) **Deterministic techniques**, such as complete project delivery model analysis, specific to requirement - sensitivity analysis or breakeven analysis.

(b) **Probabilistic techniques**, quantify risk exposure by deriving probabilities of achieving different values of economic worth from probability distributions for influencers or input values that are uncertain.

(c) **Design conformity based techniques** that reduce environmental impact and risk exposure by identifying norms and parameters that need to be conformed to and assessed during a project to ensure the environmental impact is minimum. It needs to be mentioned that this toolkit focuses on the insights for sustainable project management and does not include in-depth information on controlling uncertainty.

**Further said, deciding on the techniques that need to be adopted is dependent upon**

- (1) The size of the project
- (2) Its importance, its role
- (3) Knowledge, and Resources available for project implementation
- (4) Triple bottom line benefits expected from project
- (5) The project management methodology to be adopted for the project

### **Step 2: Including of the Conservation element**

Writing of a business case that identifies which Sustainability Project Factors or Elements are important for the project's lifetime for e.g. Quality Management, Site of Building Management (or Building Design, Construction and Commissioning), Energy Utilization (and emissions), Water Utilization (and effluents), Waste Management, Chemicals Utilization, Supply Chain Management and Disaster Management.

**Today this focus must include** (1) Need to acknowledge environmental safety related product declarations in all aspects of the project delivery model (2) Health and productivity of employees and staff and (3) Related need for risk mitigation and disaster management during the project lifecycle.

### **Step 3: Including of the Planning element**

1. Identification of pain points and drivers to justify the business case
2. Development of methodologies and strategies to implement sustainability

3. Definition of a roadmap and project charter for the systematic implementation of sustainability requirements and recommendations in the project's lifetime

#### **Step 4: Adding the enabling or constraining element**

A managing committee's compilation of project management methodologies and self-assessments can help understand the needs of the roadmap, charter and the gaps in the current delivery model for the expected continual excellence, conservation and sustainability.

#### **Step 5: Adding the monitoring and/or controlling element**

A managing committee's compilation of Lifecycle Patterns Assessments (LCPA) for projects can help understand the performance for continual excellence, conservation and sustainability. These details are available in the section of the toolkit titled –Lifecycle Patterns Assessments||

The author finds that such assessments will compliment what is achieved via norms like

(1) Service Level Indicators for the project lifecycle

(2) Key Performance Indicators for the project lifecycle

(3) Gap Analysis for the Sustainability Factors or influencers in the project lifecycle

The author states that norms (1) and (2) vary from project to project but norm (3) can be envisioned, so as to incorporate aspects like Design Elements Conformity, with the inclusion of Critical Control Variables and Critical Operational Symptoms projected as vital for sustainable projects.

## **Step 6: Commissioning for sustainability**

In the past commissioning was known to clear a facility for business operations and subsequent utilization, from the context of sustainable project management – commissioning for sustainability involves approving and finalizing of the process groups and the P-D-C-A cycles to be used for the management of the project and its lifecycle

- 1. The Initiating Process Group** (Defines or authorizes the project phases)
- 2. The Planning Process Group** (Defines, and revises value drivers, objectives and plans course of action required to attain the objectives and scope that the project was undertaken to address)
- 3. The Executing Process Group** (Integrates norms for Design Elements Conformity, people and other resources to carry out the project management plan for the project)
- 4. The Monitoring & Controlling Process Group** (Regularly monitors and controls progress to identify variances from project management plan and to carry out corrections to ensure that the plan will be met)
- 5. The Closing Process Group** (Finalizes acceptance of the project, or result and ensures that the plan is brought to an orderly end with a **Project Management Proverbial** being updated)



## **Gap Analysis for the Sustainability Factors or influencers in the project lifecycle**

This gap analysis can improve —existing processes, structures, hierarchy and people perspectives to deliver for the new vision of sustainable projects. This gap analysis includes assessments of adherence and results for 3 different aspects i.e.

- 1. Design Elements Conformity** (a new perspective for project management)
- 2. Critical Control Variables** (an existing concept in project management)
- 3. Critical Operational Symptoms** (an existing concept in project management)

### **About Design Elements Conformity**

The ISO 14000 family of standards for environmental management acts as a practical toolbox to assist in the implementation of actions supportive to sustainable development. AOEC finds that it is not so easy for a common organization to procure, interpret and incorporate the norms and recommendations of the entire ISO 14000 family of standards.

The author's toolkit helps alleviate this problem by underlining that certain Design Elements Conformity can be incorporated in project management methodologies.

This ideation begins with an understanding that there are certain key areas of project management that are important for every project lifecycle.

With this as the focus, it is then important to identify the gap or need for transformations that exist in the current PMBOK model, to make project delivery sustainable.

It needs to be said that the PMBOK methodologies have evolved and persisted over time due to the continually excellent efforts of different teams and people interested in making project management end-to-end and efficient.

The author's identification of possible gaps is only from the point of view that certain areas of project management need revision to measure up to the global synergy expected in all organizations and their projects.

To know more about the gaps and global synergy expectations you need to place an order for the "Gap analysis toolkit".



## **F. Implementing all this and more**

The author's "**Gap analysis toolkit**" can help a management team prioritize what an organization must take as most relevant steps to plan for, implement and achieve **project management** for sustainable development, growth and to stay ahead in this millennium.

The "**Gap analysis toolkit**" for the apparels industry is available **either on CD or on printed media** as required by the subscriber.

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