BALANCED SCORECARD FOR QUALITY EXCELLENCE IN THE CONSTRUCTION INDUSTRY: A SUCCESS STORY

“Strategic Performance Management Through Balanced Scorecard: Local Experience” Seminar

LIU T. C. Davis  WAN K. M. Sammy
1. Introduction – *Strategic tools for business excellence*
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1. Introduction

- All contractors and consultants in Hong Kong are required to be certified to meet ISO 9001 standard as a prerequisite for Government projects.

- Numerous problems encountered in the conventional construction industry.

- New generation of ISO 9000 series in which the Total Quality Management (TQM) principles are resembled.

- The Balanced Scorecard (BSC) – a performance measurement tools with four perspectives.
1. Introduction

- Some areas of the ISO 9000 standard and BSC are common in nature and content.
- Brief conceptual introduction and comparison of ISO 9000 standard and BSC.
- The possibility of integration as a consolidated strategic tool.
- Some practical experience sharing of an E & M contractor in Hong Kong.
PROBLEMS BESETTING

Criticism of Traditional Construction Management
2. Problems Besetting

- Fail to put efforts on less tangible and non-financial measure such as site safety record and environmental performance.
- Culture of “Just-make” and lack of culture of continuously improving on its products and operations.
- Customer satisfaction not in focus.
- Extensive use of traditional and labour-intensive construction methods.
- Inadequate trained and skillful workforce.
2. Problems Besetting

- **Short-term attitude** to business development.
- **Misleading information** for cost allocation, control and decision making.
- Fragmentation and adversarial **culture** within the industry.
PHILOSOPHY OF QUALITY MANAGEMENT
Towards Millennium
3. Philosophy of Quality Management

- QM is designed to continually improve performance and address customer requirements.
- ISO 9000 standard assists the establishment and implementation.
- A breakthrough of quality characteristics in ISO 9000:2000 with eight principles as fundamental to management.
3. Philosophy of Quality Management

EIGHT PRINCIPLES

Customer focus
Involvement of people
System approach
Factual approach

Leadership
Process approach
Continual improvement
Mutually beneficial supplier relationship
3. Philosophy of Quality Management

- Based on a **process model** and all processes are interconnected effectively.
- Achieve the **quality objectives** derived from customers’ expectations and stakeholders’ implied requirements.
- Similar to principles of the international **Business Excellence Models** (except excellence in business results).
- **Contributes** to productivity, competitiveness, customer satisfaction and continual improvement.
3. Philosophy of Quality Management

- Customer Requirements
- Management Responsibility
- Resources Management
- Measurement, Analysis & Improvement
- Continual Improvement
- Product Realization
- Product
- Customer Satisfaction
THE BALANCED SCORECARD

Four Perspectives Management
4. The Balanced Scorecard

- A performance measurement method and strategic management tool for measuring both tangible and intangible assets.
- Different perspectives towards balanced long-term strategic goals.
- Translates strategy and vision into critical success factors.
- There are correlations and causations in the cause-and-effect relationships of four perspectives.
- Improvement in one area will contribute to the driving of improvement in other elements and “Chain Process” is achieved.
4. The Balanced Scorecard

- Financial Perspectives
- Customer Perspectives
- Vision & Strategy
- Internal Business Process Perspectives
- Learning & Growth Perspectives
4. The Balanced Scorecard

- The vision and strategy are translated into objectives and are communicated and aligned to all levels.
- A business plan for allocating resources or budgets is important.
- Feedback and learning processes should be implemented.
- Different market situations, business climates, competitive environments require different scorecards.
4. The Balanced Scorecard

Examples of Success Factors – Financial Perspective

- Total assets / employee ($)
- Revenues / employee ($)
- Profits / employee ($)
- Market value ($)
- Return on net assets ($)
- Return on total assets (%)
- Value added / employee ($)
- Profit margin (%)
- Contribution margin (%)
- Cash flow ($)
- Solvency (%)
- Return on investment (%)
- Total costs ($)
4. The Balanced Scorecard

Examples of Success Factors – Customer Perspective

- Number of customer (no.)
- Market share (%)
- Customer lost (no.)
- Satisfied-customer index (%)
- Customer-loyalty index (%)
- No. of visits to customers (no.)
- No. of complaints (no.)
- Marketing expenses ($)
- Brand-image index (%)
- Average customer size ($)
- Customer rating (%)
- Service expense / customer / yr ($)
4. The Balanced Scorecard

Examples of Success Factors – Process Perspective

- Processing time (no.)
- On-time delivery (%)
- Average lead time (no.)
- Inventory turnover (no.)
- Improvement in productivity (%)
- IT capacity / employee (no.)
- Emissions from production (no.)
- Environmental impact (no.)
- Industrial accident (no.)
- Cost of administrative error (%)
- Administrative expense ($)
- Contracts filed without error (no.)
- Time for decision making (no.)
4. The Balanced Scorecard

Examples of Success Factors – Learning & Growth Perspective

- R&D expense ($)
- Investment in training ($)
- Patents pending (no.)
- Satisfied-employee index (no.)
- Empowerment index (no.)
- Ratio of new products (%)
- Leadership index (no.)
- Motivation index (no.)
- Employee turnover (%)
- Average absenteeism (no.)
- University degree holders (no.)
- CPD training hours (no.)
INTEGRATION OF TWO SYSTEMS
A Holistic Strategic Management System
5. Integration of Two Systems

- QMS does not emphasize the financial perspective and balanced goals.
- BSC lacks a comprehensive operation system which specifies basic elements for smooth, effective and efficient management.
- BSC may well be reconciled with QMS for developing a holistic strategic management system.
- Lead to long-term strategic financial and non-financial goals and achieve stakeholders’ satisfaction.
The critical success functions are strategically aligned with critical quality objectives.

Establish critical strategic business objectives in seeking a full spectrum measurement and analysis.

Goals are derived by linking management responsibility and leadership to resources management.

Full involvement of all levels is vital and communication becomes the primacy of integration.
5. Integration of Two Systems

- An integrated measurement becomes an integral part of the factual management of system.
- Measurement and alignment of objectives in business management processes.
- Validation and modification of cause-and-effect relationships through feedback and learning system.
5. Integration of Two Systems

Stakeholders Expectation

Management Responsibility

Financial Goals

Customer Goals

Internal Business Process Goals

Learning & Growth Goals

Vision & Strategy

Process Operation & Realization

Product s & Services

Measurement, Analysis & Improvement

Initiatives Alignment

Feedback & Learning

Balanced & Continual Improvement

Communicating & Linking

Business Planning

Resources Management

Stakeholders Satisfaction

Financial Goals

Learning & Growth Goals
5. Integration of Two Systems

- BSC supplemented QMS by linking traditional cost of quality to regular financial performance.
- Deepens the top-level commitment for business long-term strategy.
- Broadens further the perspectives of the BSC.
- Invites respective stakeholders to commit in quality cultivation.
- Acts as a company’s common language for strategic improvement and business excellence.
5. Integration of Two Systems

- **FINANCIAL**
  - Clause 6

- **PROCESS**
  - Clause 4.1, 4.2, 4.3, 7 & 8

- **CUSTOMER**
  - Clause 5.2, 8.2 & 8.5

- **LEARNING & GROWTH**
  - Clause 6

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**Vision & Strategy**

- **Customer Goals**
- **Learning & Growth Goals**
- **Financial Goals**
- **Internal Business Process Goals**

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ANALOGUE GROUP’S EXPERIENCE
Feasibility & Challenges
6. Analogue Group’s Experience

Company Profile

- Key player in the E&M contracting industry in Hong Kong and Mainland China including design, supply, installation, testing & commissioning, operation and maintenance of:
  - Building automation systems
  - Electrical services systems
  - Fire services systems
  - HVAC systems
  - Plumbing & drainage systems
  - Sewage and water treatment systems
  - System operation and maintenance
6. Analogue Group’s Experience

Essential Company Processes / Operations

- New installation project:
6. Analogue Group’s Experience

Essential Company Processes / Operations

- Service & maintenance project:
6. Analogue Group’s Experience

- AG currently maintains four ISO 9001 certificates and has gained experience for QMS in construction industry for about ten years.
- BSC model is introduced as a performance measurement tool and to complement the QMS to achieve its quality objectives.
- Two management models are effectively implemented after they are integrated into one system.
6. Analogue Group’s Experience

Vision & Strategy

Critical Business Objectives

Communicating & Understanding

Management Commitment

Strategy Map & Plan

Interfaces Alignment

Incentive System

Data Analysis Support

Specific Duties of Staff Members

Training Session

Focus Group Meeting

External Consultant
6. Analogue Group’s Experience

- Top-level commitment is vital and each colleague is assigned with specific responsibilities.
- A strategy map is created to link objectives and measures for each department implementing the system.
- Rating for each critical business objective is essential and subject to change under varying business environment.
- Regular meetings and training sessions are organized to discuss the underlying logic of system and to review performance achieved.
6. Analogue Group’s Experience

- A proper incentive system is created to link the objective achievement with reward system.
- Information technology support is provided to handle, manage and analyze the data.
6. Analogue Group’s Experience

Bear In Mind

Ask yourselves the following questions before the implementation.

- **Why** we need an integrated system?
- **What** objectives and measures are appropriate for our department?
- **How** are resources determined to implement the system?
- **Does** company recognize our intangible achievements?
6. Analogue Group’s Experience

Implementation Commentaries

- “Help us to be more focused…”
- “Guide us through in a more balanced way in our operation…”
- “Help to manage the department – give an overall picture, drive to work on weak areas…”
- “Help in planning and provide an indicator to performance…”
- “Help to reinforce regular review of accomplishment in a more balanced way…”
6. Analogue Group’s Experience

Implementation Commentaries

- “Help to drive planning and execution of new system / method to improve operation efficiency…”
- “Take it serious, manage the system with care, 用心去做, 不要為 做而做, 交功課…”
- “Enhance communication with empowerment using the same language, barriers are broken…”
- “Save much of our time not to implement two systems separately…”
7. Discussion & Conclusion

- ISO 9000 can hardly ensure “real” quality in construction industry.
- BSC provides necessary mechanisms to realize strategy from different perspectives.
- Two systems can be integrated to achieve synergy.
- Achieves customer satisfaction while being sustainable by maintaining balanced objectives and performance.
- May help tackle the problems being faced in the construction industry at large.
Benefits to Company

- Mobilizes company’s potential for strategic thinking.
- A tool for communication and dialogue.
- Provides documentation of shared views about strategic intentions.
- Useful for realizing strategy from time to time.
THANK YOU