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Measuring teamwork culture: the use of a modified EFQM model

Measuring
teamwork
culture

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Abstract *This paper discusses teamwork, development of a team-based organisation and performance measurement issues. This discussion leads to the formulation of a methodology to measure the organisational journey towards a team-based organisational paradigm. The TEaM model, a model based on the EFQM excellence model, is suggested as a self-assessment tool for the measurement of teamwork culture in organisations. Consequently, a five step-approach aimed at successful acquisition of the proposed model is recommended. The authors demonstrate the usefulness of TEaM, not only in the improvement of teamwork culture in organisations, but also in reducing the resistance to change efforts while supporting the knowledge exchange through continuous self-assessment of teams.*

Introduction

Teamwork culture is widely acknowledged as a way to face today's turbulent environment and to create a flexible high performance organisation responsive to ongoing change. Nevertheless, the development of teamwork culture is difficult, and numerous unknown questions emerge which are yet to be answered, despite a torrent of thoughtful papers concerning this subject. One of the crucial questions is how to measure and monitor teamwork culture development in order to reinforce continuous improvement in team and organisational performance. Moreover, this problem is aggravated because the measures of performance (MoP) have to take into account the multi-dimensional construct of teamwork (Adair, 1986; Stott and Walker, 1995; Scholtes *et al.*, 1996); the individual-, the team- and the organisational-dimensions and the necessity of their alignment.

Team development

There is a general agreement that teams progress through different stages (Syer and Connolly, 1996; Katzenbach and Smith, 1993; Robbins and Finley, 1996; Stott and Walker, 1995). These stages are defined within the "form-storm-norm-perform" model (FSNP model) of team development from Tuckman and Jensen (1977). The FSNP model describes key features in team development.



The key features (characteristics) are natural steps of progression as a team “gels” together into a “single organism”, able to tackle and solve problems efficiently, with the minimum amount of time and effort taken. Many authors accordingly use this model as the framework for their theories (Kur, 1996; Rickards and Moger, 1999), with similar conclusions. Other authors focus on the interaction of different theories. For instance, Sheard and Kakabadse (2002) propose the integrated team-development framework (ITDF). They draw from the research of Adair (1986) and Tuckman and Jensen (1977) and suggest monitoring development of teamwork in four dimensions (task, individual, group, environment) using the FSNP model by Tuckman and Jensen (1977). Drawing from this theoretical basis and consequent research, Sheard and Kakabadse (2002) conclude that the significance of factors affecting team development differs during FSNP stages. For instance, during the forming stage “clearly defined goals”, “priorities”, “communication” are the most significant factors, whilst in the storming stage it is “team dynamics”. “Leadership” is most dominant during the norming stage and the performing stage requires focus on “priorities”, “communication” and “infrastructure”.

Another important issue in teamwork development is the composition of a team. Oakland (1993) states that no one person has a monopoly of good characteristics because they are often contradictory (i.e. good listener v. fluent communicator). Nevertheless, a team as a whole can possess most of the desirable characteristics. According to Belbin (1981), the most successful teams have a distribution of the eight specific team roles (co-ordinator or chairman; shaper; plant; monitor-evaluator; implementor or company worker; resource investigator; teamworker; finisher). Other authors (Barger and Kirby, 1995; Oakland, 1993; Sharp *et al.*, 2000) strongly advocate the use of the Myers-Briggs type identifier (MBTI). Based on Jungian psychology, people can be categorised and grouped together according to the similarities in their natural preferences, and people tend to develop particular behavioural habits and styles related to their preferences. The MBTI characterises an individual on four dimensions: introvert-extrovert (I/E), sensing-intuitive (S/I), thinking-feeling (T/F), and judging-perceptive (J/P). This corresponds to 16 possible personality types (Myers and McCauley, 1992). Understanding of personality preferences, and how it affects the way team members prefer to operate, helps to understand and deal with other team members (Sharp *et al.*, 2000). Nevertheless, there is often misplaced overemphasis on individual competence levels and not enough attention paid to team competency. For instance, Margerison (2001) advocates a “team competencies model” that highlights the nine key performance factors associated with work process necessary to ensure high performance:

- (1) *Advising* – gathering and reporting information.
- (2) *Innovating* – creating and experimenting with new ideas.
- (3) *Promoting* – exploring and presenting opportunities.

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- (4) *Developing* – assessing and testing new approaches.
 - (5) *Organising* – arranging how things will work.
 - (6) *Producing* – making and delivering outputs.
 - (7) *Inspecting* – controlling and auditing the working systems.
 - (8) *Maintaining* – upholding and safeguarding standards and processes.
 - (9) *Linking* – co-ordinating and integrating with others.

Developing a team-based organisation

The previous section of the paper discussed team development and some theories and tools to strive for this development. Nevertheless, as some researchers assert (Stott and Walker, 1995; Scholtes *et al.*, 1996; Adair, 1986), teamwork is a multi-dimensional construct that has more than one dimension and all those dimensions have to be taken into account. These dimensions are related to:

- the organisational dimension;
- the team dimension;
- the individual dimension.

It is necessary to recognise that conditions in one dimension critically affect conditions in other dimensions and that for effective team development every dimension needs to be developed (Stott and Walker, 1995). A team is typically a part of the organisation, and by the organisational dimension in our discussion it is meant the influence the organisation has on team(s) development and performance.

Beer (1980) argues that organisations are “social inventions designed to achieve economic or other purposes while at the same time fulfilling members’ needs”. The effectiveness of the organisational design must be judged by the congruence or fit “of social structures and processes with the individuals being recruited and the environment being served” and the following four organisational components must be congruent (Beer, 1980):

- (1) *People*: abilities, needs, values, and expectations of employees.
- (2) *Process*: the behaviours, attitudes, and interactions that occur within the organisation at the individual, group, and intergroup level.
- (3) *Structures*: the formal mechanisms and systems of the organisation that are designed to channel behaviour toward organisational goals and fulfil member needs (examples of these include job description, job evaluation system, organisation structure; policies; selection systems; control systems; and reward systems).
- (4) *Environment*: the external conditions with which the organisation must deal including its market, customers, technology, stockholders, government regulations, and the social culture and values in which it operates.

Beer (1980) argues that these four components determine organisational culture. An organisational culture is understood as a characteristic of day-to-day environment as seen and felt by those who work there (Wallace *et al.*, 1999; Choueke and Armstrong, 2000). The research has shown that there is a relation between organisational culture and performance of the organisation. For instance, Choueke and Armstrong (2000) investigated the influence of organisational culture on the performance of companies and conclude that in the majority of cases respondents who identified unique cultures in their organisations believed that those cultures had a positive effect on the performance of their companies. Wallace *et al.* (1999) assert that all organisations have more than one culture: formal culture (idealised statements of what beliefs and behaviour should be) and informal culture (actual beliefs and behaviours) and that informal character or culture is the key to understanding organisations.

Beer (1980) and Sadri and Lees (2001) emphasise the influence the external environment has on organisational culture. External environment influences an organisation directly (legislation, government regulations) and indirectly (expectations and values of employees). On top of that, the dynamics of the market dictates the pace of change in organisations, and the frequency of the need for change influences organisational culture: organisations in fast changing environments have typically more loose structures, whilst the organisations in slow changing environments have more bureaucratic structures. Beer (1980) concludes that “successful organisations can be separated from unsuccessful ones by appropriateness of their structural form and management process to their environment.” Sadri and Lees (2001) report that organisations which are able to maintain positive culture are likely to enjoy many benefits such as work environment that is more enjoyable, increased levels of teamwork, sharing information, openness to new ideas, learning activations, and such culture helps to attract and retain top employees. Barger and Kirby (1995) summarise the essentials of organisational culture for success in a new environment as:

- intelligence;
- knowledge and experience;
- ingenuity and creativity;
- courage and willingness to take risks;
- ability to be flexible, to try new things and new ways of living;
- willingness to form new relationships, to trust people.

Similarly, the individual dimension plays equal importance in teamwork culture development. Many authors (Biberman and Whitty, 1997; King and Nicol, 1999; Butts, 1999) call for spiritual change in the working environment and for the support of spiritual development of organisational members. King

and Nicol (1999) state that individuals are more than ever experiencing a lack of meaning in their lives and a sense of spiritual desolation and, thus, many people are embarking upon a spiritual journey and, because work is a central part of our existence, much of this spiritual odyssey occurs within the context of the workplace. King and Nicol (1999) propose that “an organisation whose work environment responsively supports the quest for individual unity and direction, and fosters spiritual development, will realise heightened individual and organisational performance.” They furthermore assert the following:

- There is a relationship between an individual’s spiritual quest and the organisational environment; it is necessary for the organisation to be structured to support the individual’s growth.
- In business relationships, individuals who are aware of their projections are able to develop an understanding of the source of interpersonal conflicts; consequently, they are more objective in assessing situations and making decisions and they are more accepting and less prone to blame others, thereby enhancing teamwork.
- The health of an organisation is dependent on the quality of its interpersonal relationships; when individuals become more emancipated from their individual views, they are more tolerant, willing to delegate work, to empower others and to be empowered.
- The nature of the organisation’s structure in terms of the extent to which it acknowledges and responds to an individual’s values and capabilities is key to organisational health and prosperity; the organisation possesses a powerful capacity to influence and be influenced by the individuals within it.
- By understanding and acting on the spiritual paradigm, the organisation has the capacity to support the spiritual growth of its members and, as a consequence, unleash its potential; the organisation can maximise the energy present in the dreams, skills and aspirations of those that make up its reality.

Butts (1999) argues that “what is needed is sufficient clarity and theoretical understanding of the meaning of spirituality and how it can apply to work, especially in terms of personal satisfaction, peak performance, and overall business success that can also enrich communities, cultures, and the Earth itself”. One useful way of integrating spirituality in the workplace is through sacred/ultimate/whole-system values, which enable the human spirit to grow and flourish. These time-honoured, life-affirming, and unifying values, which can also enhance profit and productivity, include (Butts, 1999):

- truth and trust (which liberate the soul);
- freedom and justice (which liberate creative and co-creative genius);
- creativity (innovation);

- collective harmony and intelligence (wholeness, synergy);
- deeper meaning, and higher purpose.

Performance measurement

The overall goal of performance management is to ensure that the organisation and all of its subsystems (processes, departments, teams, employees, customers, reward systems) are working together in an optimum fashion to achieve the results desired by the organisation (Jones, 1994). Rummler and Brache (1995) argue that performance management should strive to optimise results and alignment of all subsystems to achieve the overall results of the organisation and any focus of performance management within the organisation should ultimately affect overall organisational performance management as well. Rummler and Brache (1995) advocate a holistic approach to performance measurement that recognises three levels of performance:

- (1) *Organisational level*: organisational relations to its markets; the variables that affect performance at this level are organisational strategies, goals, objectives, organisational structure and deployment of its resources.
- (2) *Process level*: focused at work flow in the organisation; process level is connected to the output of the organisation; performance variable must meet the needs of the customer.
- (3) *Job/performer level*: processes are managed by individuals; typical variables include hiring and promotion, job responsibilities and standards, feedback, rewards, and training.

Achieving the overall goal requires several ongoing activities, including identification and prioritisation of desired results, establishing the means to measure progress toward those results, setting standards for assessing how well results were achieved, tracking and measuring progress towards results, exchanging ongoing feedback among those participants working to achieve results, periodically reviewing progress, reinforcing activities that achieve results and intervening to improve progress where needed (Zairi, 1994). When the performance measurement system is designed, different types of performance indicators (PIs) should be included (Flapper *et al.*, 1996):

- *Financial versus non-financial*: the traditional financial PIs alone are no longer sufficient to determine the company's health; other types of indicators are needed as well.
- *Global versus local*: global PIs are for top management, and local PIs for managers at lower levels.
- *Internal versus external*: internal PIs are used to monitor the performance of an organisation on aspects that are relevant for its internal functioning, whereas external PIs are introduced to evaluate the performance of the organisation as experienced by customers or to evaluate the performance

of suppliers, where customer and supplier can also refer to different parts of one organisation.

- *Organisational hierarchy*: the vertical relations between PIs are often based on the organisational structure of a company; the hierarchy functions in a natural way to aggregate PIs at a certain level into a smaller number of indicators at the next higher level (a bottom-up approach).
- *Area of application*: this classification is department oriented: R&D, operations, sales and marketing; the idea behind this classification is that each department requires its own PIs.

Bititci *et al.* (1997) state that there are two critical elements with respect to the content and structure of the performance measurement system: integrity and deployment. The former refers to the ability of the performance measurement system to promote integration between various areas of the business. The latter refers to the deployment of business objectives and policies throughout the hierarchical structure of the organisation, thus ensuring that performance measures used at various levels of the organisation reflect the business objectives and policies; deployment is consistent through the hierarchy of the organisation; and deployment is relevant and correct with respect to the impact and influence of individual business areas (i.e. processes, functions and activities (Bititci *et al.*, 1997)).

Handy (1994) argues that we have entered the knowledge era and that knowledge is the most important asset that organisations have. Kaplan and Norton (1996) support this and assert that “the ability of a company to mobilise and exploit its intangible assets has become far more decisive than investing and managing physical, tangible asset”. They furthermore argue that intangible assets enable an organisation to:

- develop customer relationships that retain the loyalty of existing customers and enable new customer segments and market areas to be served effectively and efficiently;
- introduce innovative products and services desired by targeted customer segments;
- produce customised high-quality products and services at low cost and with short lead time;
- mobilise employee skills and motivation for continuous improvement in process capabilities, quality and response times; and
- deploy information technology, data bases, and systems.

Measuring teamwork performance

Measurement of performance is generally recognised as an important factor in organisational and team development (Deming, 1986; Zairi, 1994, Ishikawa,

1985, Oakland, 1993). Nevertheless, teams rarely know how to check their own strengths and weaknesses (Chang *et al.*, 1995) and many organisations moved towards team-based organisation without changing their measures of performance, which would reflect this change (Meyer, 1998). As discussed, a team is established with a task and therefore there is a strong relationship between teams and performance. This fact is widely suggested by many authors on teamwork (Munro-Faure *et al.*, 1998; Katzenbach and Smith, 1993, Chang *et al.*, 1995), yet these authors argue that in many organisations teams do not use any measures of their performance. Especially, Chang *et al.* (1995) strongly advocate that even spontaneously met teams should develop a measurement system.

Beer (1980) states that the essence of organisational development is the capacity of its managers and workers to examine that they are working together so that “inappropriate processes can be corrected based on firsthand knowledge of the task and people’s needs”. In terms of teamwork development, Syer and Connolly (1996) state that there are two traditional ways of evaluating team performance:

- Tracing the different phases of a team’s life cycle; for instance using the FSNP model developed by Tuckman and Jensen (1977).
- Evaluating structural patterns of team; for instance by using inventory developed by Belbin (1981); both are discussed in the section “Team development”.

Syer and Connolly (1996) furthermore argue that “the only form of improvement offered by these models is to replace members who fail to show a certain ability with others who appear to have it”. Chang *et al.* (1995) provide a more holistic view on teamwork measurement and make the point that a team needs to measure the effectiveness of the goal as well as the way the team reaches its goals, i.e. team dynamics (roles, responsibilities, clear guidelines). Typical measures will include (Chang *et al.*, 1995):

- clarity of goals and objectives;
- achievement of results;
- structure;
- problem-solving skills;
- support of leadership;
- use of team resources;
- recognition and motivation;
- conflict management;
- understanding of roles;
- effectiveness of communication;
- creativity.

These measures include both qualitative and quantitative measures. Chang *et al.* (1995) suggest quantitative tools, i.e. surveys, observation, use of existing data; and qualitative tools, i.e. interviews, observation, critical incidents. It is further advocated by Chang *et al.* (1995) to involve different shareholders in assessment of team performance (peer feedback survey). Zigon (1997) asserts that the team performance measurement system should include:

- a statement of the results the team will be working to achieve, with measures and performance standards for each result;
- statements of each individual's results, with measures and performance standards for each result;
- a clear picture of the priorities and relative importance of the team and individual results; and
- a plan of how to collect and summarise performance data, so the team and individuals will know how they are performing compared to the performance standards.

The increasing importance of teamwork in the current business environment is evident and this fact has led to the development of the teamwork awards, which also provide frameworks of teamwork measurement. For instance, the National Society for Quality through Teamwork (NSQT) developed a seven-stage model of the elements, which are used for assessment of teamwork excellence. The NSQT model comprises areas such as management commitment and planning; education and training; implementation; measurement and benchmarking; recognition; regeneration; and communication (Teare *et al.*, 1999).

The authors (researchers), in co-operation with the Centre for Organisational Excellence, The University of Salford (CorE), have undertaken research aimed at determining factors affecting successful implementation (FASI) of high performance teams (HPTs; Castka *et al.*, 2001) and suggest seven FASI, that are described in Table I.

These factors led to the development of the conceptual model of factors affecting successful implementation of HPTs (Castka *et al.*, 2001) which has been tested using case study organisations as the focus of observation and direct assessment of the factors represented in the model. The authors (Castka *et al.*, 2001), in conclusion, suggested the implementation plan aimed at rejuvenating teamwork culture in organisations. Similar to the NSQT model, they advocate the assessment of teamwork excellence in view of the seven factors affecting successful implementation of HPTs (FASI) and they emphasise the necessity of the assessment of all dimensions as mentioned above.

Adopting the EFQM excellence model

One of the factors identified in the previous research of the authors was "alignment and interaction with external entities (Table I)". While working at a case study organisation, it was concluded that the MoP for a team were difficult

Critical factor	Description
Organisational impact	This factor covers the impact the organisation has on team development such as creation of organisational culture supporting teamwork, allocation of time, space, resources; team reward and appraisal etc.
Defined focus	This includes specification of task, promised level of performance, deadline, customer and team deals with project management and future planning
Alignment and interaction with external entities	Capability of a team to maintain the alignment with other teams, managers, suppliers, and customers
Measures of performance	This factor covers the ability of the team to establish measures of performance that help to gauge the team's progress and task completion aligned to the customer requirements
Knowledge and skills	This includes skills such as interpersonal and joint skills (dealing with conflict, dynamics of teamwork, how to conduct a meeting, effective decision making, communication skills, effective record keeping, leadership skills); analytical and statistical skills; improvement techniques and skills related to a particular job
Need of the individual	This factor deals with individual needs and different personal preferences of team members in order to perform as a team member
Group culture	Development of group culture based on empowerment, shared vision, creativity, participation, learning ability, trust and shared consensus

Table I.
Factors affecting
successful
implementation of
HPTs

to define because of the different system utilised within the entire case study organisation. In consequence, the possibilities of the modification of the EFQM framework have been considered. The use of a self-assessment methodology is advocated, for instance, by Zairi (1994), an acknowledged expert in measurement of performance, who advocates the use of the Malcolm Baldrige National Quality Award (MBNQA) or the European Quality Award (EQA) framework as effective tools for the measurement of the culture of quality and to determine whether the quality efforts are deployed effectively. Zairi (1994) argues that assessment helps organisations in many ways, including providing the opportunity to take a broader view on how measured activity is impacting on various business operations; measuring performance of processes, enablers and their relationship with results; measuring internally and externally – including the community and the environment; providing an opportunity to benchmark and compare like for like or; measurement for improvement rather than for hard control. Finally, self-assessment is also an important communication and planning tool (Hakes, 1994; Porter and Tanner, 1996; Hillman, 1994):

-
- The results of self-assessment provide a growing common language through which organisations, or parts of organisations, can compare their performances.
 - The outputs of self-assessment are used for strategic management and action planning, or as a basis for an improvement project.
 - New business values: leadership, people, process management, the use of information within the organisation and the way customer relationships are managed.

The investigation of the framework revealed several features which have driven further development of the modified model, taking into consideration the benefits organisations have undoubtedly seen in using the EFQM model:

- The framework of the model is a widely acknowledged tool leading toward business excellence.
- The model is being used in an increasing number of organisations from different fields (Van Der Wiele *et al.*, 1996; Thiagarajan and Zairi, 1997; Jackson, 1999).
- Companies using EFQM are committed to teamwork culture development as well (D2D, 1994; TNT, 1998; EFQM, 1998).
- A modified model would fulfil the objective – to align measures of performance and provide a simple yet powerful self-assessment tool for teamwork culture assessment.
- Business members trained and committed to using EFQM could apply a modified framework of the EFQM model with greater ease.

In discussing organisational learning and development, Warne *et al.* (2000) have said: “. . . the key to success of an organisation is its ability to adapt to its changing environment and to effectively nurture growth, sharing the sustenance of the corporation’s historical and dynamic knowledge”. A developed EFQM model that is appropriate for the assessment of team performance and culture can provide for the sharing of historic and dynamic knowledge as teams periodically self-assess their performance and share their stories of progression and development with other teams in the organisation. It is argued by the authors that the process of team self-assessment therefore would lead to the building of a corporate competence for change, because in most organisations team members serve on more than one team at any time, thus knowledge transfer between teams is enhanced.

Bamber *et al.* (2000) have discussed that effective organisational change comes about when there is a clear end in mind that is shared by the people in the organisation, and such a team assessment exercise would provide the starting point for the development of a shared team vision. Furthermore, the adopted model shall include the assessment of interaction and alignment with external entities, thus giving the organisation the opportunity to communicate

and develop understanding of its vision throughout all teams. It has been considered by Clarke (1994) that “the people do not resist change they resist change being imposed upon them” hence it is considered by the authors that a team self-assessment tool is a perfect vehicle for an organisation to reduce the “resistance to change efforts” as the team members are involved in the change through team self-assessment and thus the development of their own improvement of the development programme.

The TEaM model

In consequence of the above, the teamwork excellence modified model (TEaM) is proposed (Figure 1). The model is based on the framework of the EFQM excellence model and considers the factors for successful implementation of HPTs (Table I). The criteria are partially modified to address more appropriately the teamwork culture objectives and are discussed within Table II. The model is therefore divided into three main categories:

- (1) *Organisational enablers*: represent the organisational dimension in teamwork development; the criteria used for measurement are former EFQM criteria modified for teamwork; describes how results in terms of teamwork culture development are achieved.
- (2) *Team enablers*: a new “box” in the model; are based on seven factors for successful implementation of HPTs (Table I); describes how results within a team are achieved.
- (3) *Team results*: identical description as in the EFQM; describes what the team has achieved and is achieving.

Innovation and the learning potential of a company are acknowledged as the competitive resources leading towards business excellence (EFQM, 1998) and this fact is (similar to EFQM excellence model) reflected within the model with the feedback arrow (“innovations and learning”). This conclusion is supported, for instance, by De Geus (1999), who conducted research aimed at the determination of the typical features of successful growth and longevity in business. Following

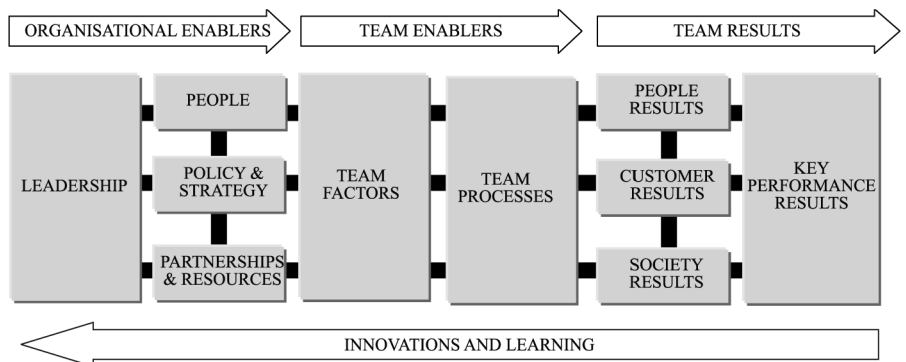


Figure 1.
The TEaM model

Key areas (criteria)	Description of critical factors
1. Leadership	1.1 Leaders develop the teamwork culture within the organisation 1.2 Leaders are personally involved in ensuring that teamwork culture is developed, implemented and continuously improved 1.3 Leaders are involved with team leaders and team members 1.4 Leaders motivate, support and recognise the teams
2. Policy and strategy	2.1 Policy and strategy for teamwork culture development (P&S) is based on the present and future needs and expectations of individuals, teams and organisation as the whole 2.2 P&S is based on information from performance measurement, research, learning and creativity related activities 2.3 P&S is reviewed and updated 2.4 P&S is communicated and implemented
3. People and teams	Knowledge and full potential of people and teams is managed, developed and released and so: 3.1 People resources are planned, managed and improved 3.2 People's knowledge and competencies are identified, developed and sustained 3.3 People and teams are involved and empowered 3.4 People, teams and the organisation have a dialogue 3.5 People are rewarded, recognised and cared for according to their individual as well as team results
4. Partnerships and resources	The organisation plans and manages teamwork and thus: 4.1 Partnerships among different teams are managed 4.2 Finances and other resources for teams are managed 4.3 Technology is managed 4.4 Information and knowledge are managed
5. Team factors ^a	5.1 Organisational impact 5.2 Defined focus 5.3 Alignment and interaction with external entities 5.4 Measures of performance 5.5 Knowledge and skills 5.6 Needs of the individual 5.7 Group culture
6. Team processes	6.1 Processes are systematically designed and managed 6.2 Processes are improved, as needed, using innovation in order to fully satisfy and generate increasing value for customers and other stakeholders 6.3 Products and services are designed and developed, based on customer needs and expectations 6.4 Products and services are produced, delivered and serviced 6.5 Customer relationships are managed and enhanced
7. People and team results	7.1 Perception measures 7.2 Performance indicators
8. Customer results	8.1 Perception measures 8.2 Performance indicators
9. Society results	9.1 Perception measures 9.2 Performance indicators
10. Key performance results	10.1 Key performance outcomes 10.2 Key performance indicators

Note: ^a discussed in detail in Castka *et al.* (2001).

Table II.
Key areas and
critical factors of the
TEaM model

on from this research, De Geus (1999) states that “most innovative companies are run by teams [and that] this is because teams have a higher capacity to learn than individuals”. Furthermore, Nonaka and Takeuchi (1995) argue that the key to the continuous innovation is “organisational knowledge creation”, i.e. the capability of a company as a whole to create new knowledge, disseminate it throughout the organisation and embody it in products, services and systems creation of knowledge in an organisation. Similar to De Geus (1999), Nonaka and Takeuchi (1995) advocate teamwork solutions.

How to use the model

To use the model effectively in developing team culture and hence moving the team towards higher levels of performance, the following five-step approach is recommended. This approach has been drawn from the research of the authors and is aimed at organisations that require a measurement system for their teamwork culture development:

Step 1. Implementation of TEaM model framework

It was discussed by Van Der Wiele *et al.* (1996) that the support of the CEO or senior management is necessary for successful implementation of a self-assessment methodology. Therefore, a steering committee with authority and responsibility should be established in order to steer the implementation process. This committee can be identical to the one responsible for carrying out wide organisational EFQM assessment, if it is already in place. At this stage, it is furthermore necessary to train the people who will do the self-assessment and also the people who will be assessed. The organisation also needs to consider and define the way in which the results will be used. Basically, the success of self-assessment is dependent on many variables but there are three crucial elements on which a steering committee should focus (Hillman, 1994; Hakes, 1994):

- (1) *Model*: which tool to be used as a framework for evaluating the organisation’s progress (the use of TEaM unchanged/the use of modified TEaM?).
- (2) *Measurement*: determination of how well the organisation is performing against each element of the model and determination of data collecting method (award-style assessment done by an assessor team assigned by the steering committee/a facilitator led assessment/questionnaires/single person assessment/mixture of above?).
- (3) *Management*: the way of managing the whole self-assessment process, from selecting the model, preparing the groundwork and communicating the plan, to conducting the assessment and acting on the results.

Hakes (1994) advocates the use of one of the three key methods of self-assessment: award-style, facilitator led assessment and questionnaire. If an

award-style process is chosen, a team typically leads this. First, the team is trained to the same level as award assessors and consequently assesses the organisation/team against the criteria. The advantage of such an approach lies in the detailed nature of the gathering and collating process, which ensures sufficient depth to give an accurate judgement of the team performance and organisational influence on teams. The disadvantage is related mainly to the lack of ownership of the process by senior managers owing to the time necessary for the preparation.

The alternative to the former approach is the use of a facilitator-led workshop. This is a perception-based workshop aimed at the steering committee itself and/or senior management. The whole model can be addressed within one day. The advantage is that it requires less time to conduct and makes it easier to involve the senior management. This fact creates the commitment for the senior management, which is one of the crucial factors to successful self-assessment. A disadvantage is the level of accuracy of the assessment. This approach tends to assess the score higher than the award approach (Hakes, 1994). Finally, general questionnaires can be used. These are not the best solution for on-going self assessment but can be used as a means to increase and generate the awareness about the process. There is a potential risk of over-simplicity and over-emphasis on numbers rather than on the underlying issues.

Step 2. Assessment against the criteria of the TEaM model

In this step the assessment process is carried out using a self-assessment tool and methodology defined at the previous step. It is preferable to use a facilitator-led workshop as an approach for the steering committee and an award-style assessment for teams within the organisation. If doing so, each team within the organisation assesses the teamwork culture using its own TEaM model. A team leader (previously trained in using the model) is responsible for the assessment, hence all team members participate in the procedure. A steering committee or senior management should encourage the teams at this stage for their efforts.

Step 3. Analysis and communication

Analysis of the data is managed at two levels:

- (1) Teams analyse “team enablers” and “team results” parts of the TEaM model and those provide “strengths” and “areas for improvement” for the team itself.
- (2) A steering committee gathers “organisational enablers” data from each team, these are analysed and the results provide the “strengths” and “areas for improvement” at organisational (and individual) levels, i.e. “how the organisation itself influences teams” and “if the organisation is able to sufficiently train individuals for teamwork”.

It is typically revealed that there are differences between various teams within the organisation. Thus during the analysis it is important not only to look at overall or “average” responses, but also at differences of opinion of different teams (Pedler *et al.*,1996). An important aspect within this step is the communication among all units involved. Team leaders (or assessors) should report the findings to the steering committee, and vice versa, in order to enhance the dissemination of the results of the assessment process. It is similarly argued by Senge (1998) that the interpretation part of the self-assessment process is more difficult than measurement itself and requires understanding, participation and physical presence, which can foster engagement and learning.

Step 4. Improvement plan

The previous step provides “strengths” and “areas for improvement” for each dimension of teamwork. As already discussed, a self-assessment tool is a perfect vehicle for the reduction of the “resistance to change efforts” because of the involvement of team members in the change process itself. This is particularly crucial when the improvement program is developed. Again, the improvement plans are developed at two levels:

- (1) Team level: each team develops its own improvement plan.
- (2) Organisational level: the steering committee develops the improvement plan aimed at the development of a teamwork culture throughout the organisation. This plan should also involve the development of individuals for teamwork.

Additionally, the measures of performance should be specified to provide criteria for assessment, review and direction of the program. Typically, the implementation plan and its supporting documentation should be based on and contain information such as (Martins and Toledo, 2000) basic principles; policies (targets and means); performance measures and check points; actions, due dates, and responsibilities; orientation regarding implementation, control evaluation. Furthermore, the steering committee should ensure that the outcomes are linked to business results and should furthermore develop a link between the self-assessment results and the recognition of individuals and teams.

Step 5. Reassessment and review of the implementation plan

Achievements in the implementation of the TEaM framework should be communicated and rewarded. On the other hand, if failure occurs, an in-depth analysis of the reason should be carried out and the steering committee should ensure that procedures change. It is strongly advocated by Drucker (1998) that “the ability and willingness to abandon programs where you don’t get results” is a challenging organisational practice. Drucker (1998) asserts the usefulness of this practice yet draws the attention to its under-development in organisations. These two practices, i.e. motivation and abandonment, are crucial in order to sustain the self-assessment process (Figure 2).

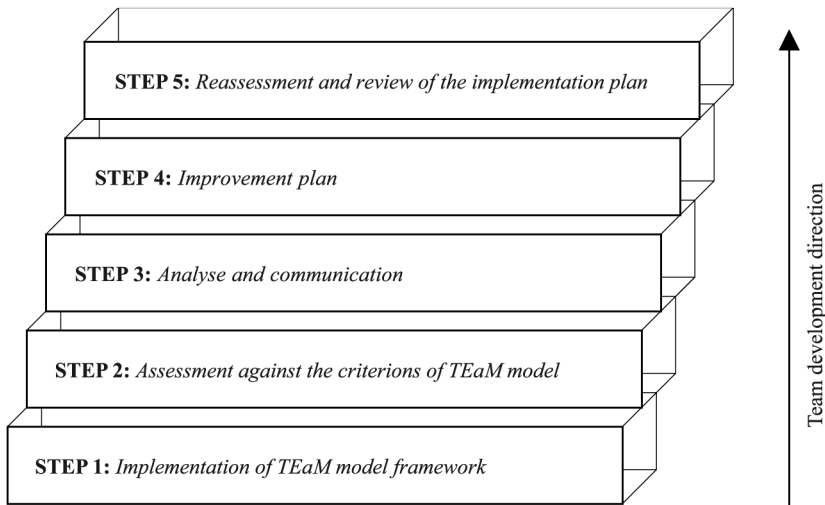


Figure 2.
Five-step approach to
TEaM model
implementation

Discussion on the research implications

Though the TEaM model suggested in this paper (Figure 1) has not undergone considerable practical use, the model has been partially validated by various methods. It provides a valuable contribution to understanding both the constructs surrounding team development and the continued value of the EFQM framework in understanding organisational assessments from different dimensions. For example, the argument for the credibility of the approach used to develop the model is first that the framework is based on the EFQM excellence model, which has been used in practice for many years and which is acknowledged to be a valuable self-assessment tool leading towards business excellence. Also, the TEaM model is based on a vast array of literature reviews presented in this paper and reflects important aspects considered by leading experts as crucial for organisational success and development. These aspects are listed in Table III.

Second, the seven factors for successful implementation of HPTs (Table I) have been derived from the substantial literature relating to teamwork, quality management and continuous improvement activities. Moreover, these factors have been tested using a case study research methodology for investigation and direct assessment of the identified factors (Castka et al., 2001), while the CORe research group continues to use the factors to analyse barriers to team improvement. In conclusion, the research design used towards the development of the model was based on the framework advocated by Yin (1989), an acknowledged expert on case study research strategy. Thus it is argued by the authors that the results from previous research provide a reliable basis for the extension of the EFQM excellence model presented in this paper.

Aspect	Thesis	References
Multi-dimensional aspect construct of teamwork	In order to develop teamwork, the individual, team and organisational level needs to be developed	Stott and Walker, 1995; Scholtes <i>et al.</i> , 1996; Castka <i>et al.</i> , 2001; Sheard and Kakabadse, 2002; Syer and Connolly, 1996
Multi-dimensional performance measurement	Systematic performance measurement has to address different levels of organisation	Rummler and Brache, 1995; Zairi, 1994; Jones, 1994; Beer, 1980; Kaplan and Norton, 1996
Differnt types of measures	Organisation should include different types of measures such as tangible and intangible, financial and non-financial etc.	Flapper <i>et al.</i> , 1996; Handy, 1994; Kaplan and Norton, 1996; Chang <i>et al.</i> , 1995
Different perspectives of teamwork culture	People from different departments and from different levels of the organisation have different opinions on the same problem	Pedler <i>et al.</i> , 1996; Wallace <i>et al.</i> , 1999; Choueke and Armstrong, 2000; Beer, 1980; Flapper <i>et al.</i> , 1996
Teamwork development measurement	A team needs to measure its performance in order to improve	Chang <i>et al.</i> , 1995; Zigon, 1997; Meyer, 1998; Syer and Connolly, 1996
Communication of practices, results, approaches	People involvement in self-assessment process improves communication of practices, results, approaches	Hakes, 1994; Porter and Tanner, 1996; Zairi, 1994; Hilmann, 1994; Bititci <i>et al.</i> , 1997
Resistance to change	Involvement in change process will build the competence to change	Clarke, 1994; Barger and Kirby, 1995; Bamber <i>et al.</i> , 2000; Warne <i>et al.</i> , 2000
Deployment of best practices	Building a common language through self-assessment helps to integrate and deploy best practices	Bititci <i>et al.</i> , 1997; Hakes, 1994; Porter and Tanner, 1996;
Knowledge creation and learning	A team as a social platform increases knowledge creation and learning	Nonaka and Takeuchi, 1995; Warne <i>et al.</i> , 2000; Senge, 1990; De Geus, 1999

Table III.
TEaM relations to literature

It is considered that the approach presented in this paper for the self-assessment of teams is a useful contribution to continuous improvement efforts of managers, leaders, team members and facilitators of teams within organisations. Consequently, the ability to assess team performance culture and improvement opportunities is considered by the authors as a great internal motivational tool for the whole team. Furthermore, the TEaM model will provide a team- or project-based focus for self-assessment that complements organisational-wide assessments, thus providing valuable assistance when organisations are carrying out organisational-wide EFQM assessments. Further to this, it is the experience of the authors that team assessment and

project review for continuous and continual improvement of team culture or performance is not a widespread practice, nor is it carried out objectively or systematically – if it is carried out. Hence, the development of the model is considered important in providing an appropriate self-assessment tool that aims to encourage team assessments.

There is no doubt that the TEaM model is in its infancy, nevertheless the usefulness, need and validity of such a team assessment model as described in this paper is not in question. The model has consequently received much interest in the UK from leading industrialists and collaborating organisations, hence the opportunity to pilot it and therefore develop such things as the scoring mechanisms and frameworks is currently being taken up (the scoring mechanisms and frameworks are not discussed here, it is the aim of further research which is intended to be published as Part II of this article). Therefore the TEaM model will develop through the application of the model in real world settings, which will continue to add value to the research into teamwork culture and improvement.

Conclusion

The journey toward a team-based organisational paradigm is a significant challenge in an increasing number of organisations. To support this effort, this paper suggests a self-assessment tool (the TEaM model) based on the EFQM framework, which can be used in organisations needing to measure, and committed to establishing the measurement of, their teamwork culture and hence performance opportunities. The results from the TEaM model assessments hence provide the information necessary for the improvement in all dimensions of teamwork culture development, i.e. organisational, team and individual. The use of the proposed framework will furthermore lead towards the improvement of communication, knowledge exchange, development of understanding of organisational vision and at the same time reduce the resistance to change efforts.

Likewise, for many organisations, researchers and management experts alike, a positive teamwork culture is seen as an essential enabler to effective organisational change. Hence, the TEaM model presented and demonstrated in this paper, if adopted by organisations counted to change management through teamwork culture development, is considered by the authors as an essential tool in developing HPTs and consequently developing a high performance organisation.

References

- Adair, J. (1986), *Effective Teambuilding*, Gower, Aldershot.
- Bamber, C., Hides, M. and Sharp, J. (2000), "Integrated management systems: an agile enabler", *Proceedings of 1st International Conference on Systems Thinking in Management*, Deakin University, Geelong, November, pp. 83-9.
- Barger, N. and Kirby, L. (1995), *The Challenge of Change in Organizations. Helping Employees Thrive in the New Frontier*, Davies-Black, Palo Alto, CA.

- Beer, M. (1980), *Organization Change and Development. A Systems View*, Scott, Foresman and Co., Glenview, IL.
- Belbin, M. (1981), *Management Teams. Why They Succeed or Fail*, Butterworth-Heinemann, Stoneham, MA.
- Biberman, J. and Whitty, M. (1997), "A post-modern spiritual future for work", *Journal of Organizational Change Management*, Vol. 10 No. 2, pp. 130-8.
- Bititci, A., Carrie, A. and McDevitt, L. (1997), "Integrated performance measurement systems: a development guide", *International Journal of Operations & Production Management*, Vol. 17 No. 5, pp. 522-34.
- Butts, D. (1999), "Spirituality at work: an overview", *Journal of Organizational Change Management*, Vol. 12 No. 4, pp. 328-31.
- Castka, P., Bamber, C., Sharp, J. and Belohoubek, P. (2000), "Factors affecting successful implementation of high performance teams", *Team Performance Management: An International Journal*, Vol. 7 No. 7/8, pp. 123-34.
- Chang, R., Bader, G. and Bloom, A. (1995), *Measuring Team Performance*, Kogan Page, London.
- Choueke, R. and Armstrong, R. (2000), "Culture: a missing perspective on small- and medium-sized enterprise development?", *International Journal of Entrepreneurial Behaviour & Research*, Vol. 6 No. 4, pp. 227-38.
- Clarke, L. (1994), *The Essence of Managing Change*, Prentice Hall, Englewood Cliffs, NJ.
- D2D (1994), *European Quality Award Submission*, Design To Distribution Ltd.
- De Geus, A. (1999), *The Living Company. Growth, Learning and Longevity in Business*, Nicolas Brealey Publishing Limited, London.
- Deming, W. (1986), *Out of the Crisis*, Massachusetts Institute of Technology, Cambridge, MA.
- Drucker, P. (1998), "The discipline of innovation", *Leader In Leader*, Vol. 5 No. 4.
- EFQM (1998), *Aspects of Excellence*, European Quality Publications, London.
- Flapper, S., Fortuin, L. and Stoop, P. (1996), "Towards consistent performance management systems", *International Journal of Operations & Production Management*, Vol. 16 No. 7, pp. 27-37.
- Hakes, C. (1994), *The Corporate Self-assessment Handbook for Measuring Business Excellence*, Chapman & Hall, London.
- Handy, C. (1994), *The Empty Raincoat. Making Sense of the Future*, Arrow Books, London.
- Hillman, G. (1994), "Making self-assessment successful", *The TQM Magazine*, Vol. 6 No. 3, pp. 29-31.
- Ishikawa, K. (1985), *What is Total Quality Control? – The Japanese Way*, Prentice-Hall, London.
- Jackson, S. (1999), "Achieving a culture of continuous improvement by adopting the principles of self-assessment and business excellence", *International Journal of Health Care Quality Assurance*, Vol. 12 No. 2, pp. 59-64.
- Jones, C. (1994), "Improving your key business process", *The TQM Magazine*, Vol. 6 No. 2, pp. 25-9.
- Kaplan, R. and Norton, D. (1996), *The Balanced Scorecard. Translating Strategy into Action*, Harvard Business School Press, Boston, MA.
- Katzenbach, J. and Smith, D. (1993), *The Wisdom of Teams. Creating the High-performance Organisation*, McGraw-Hill, New York, NY.

- King, S. and Nicol, D. (1999), "Organizational enhancement through recognition of individual spirituality. Reflections of Jacques and Jung", *Journal of Organizational Change Management*, Vol. 12 No. 3, pp. 234-42.
- Kur, E. (1996), "The faces model of high performing team development", *Leadership & Organizational Development Journal*, Vol. 17 No. 1, pp. 32-41.
- Margerison, C. (2001), "Team competencies", *Team Performance Management: An International Journal*, Vol. 7 No. 7/8, pp. 117-22.
- Martins, R. and Toledo, J. (2000), "Total quality management programs: a framework proposal", *Work Study*, Vol. 49 No. 4, pp. 145-51.
- Meyer, C. (1998), "How the right measures help teams excel", in Katzenbach, J. (Ed.), *The Work of Team*, Harvard Business Review Books, Cambridge, MA, pp. 51-64.
- Munro-Faure, L., Teare, R. and Scheving, E. (1998), *Quality Improvement. Teamwork Solutions from the UK and North America*, Cassell, London.
- Myers, I.B. and McCauley, M.H. (1992), *A Guide to the Development and Use of the Myers-Briggs Type Indicator*, Consulting Psychologists Press, Palo Alto, CA.
- Nonaka, I. and Takeuchi, H. (1995), *The Knowledge-creating Company. How Japanese Companies Create the Dynamics of Innovation*, Oxford University Press, London.
- Oakland, J. (1993), *Total Quality Management. The Route to Improving Performance*, 2nd rev. ed., Butterworth-Heinemann, Oxford.
- Pedler, M., Burgoyne, J. and Boydell, T. (1996), *The Learning Company. A Strategy for Sustainable Development*, 2nd ed., McGraw-Hill, New York, NY.
- Porter, L. and Tanner, S. (1996), *Assessing Business Excellence. A Guide to Self-assessment*, Butterworth-Heinemann, Oxford.
- Rickards, T. and Moger, S. (1999), *Handbook for Creative Team Leaders*, Gower Publishing, Aldershot.
- Robbins, H. and Finley, M. (1996), *Why Teams Don't Work. What Went Wrong and How to Make it Right*, The Orion Publishing Group, London.
- Rummler, G. and Brache, A. (1995), *Improving Performance. How to Manage the White Space on the Organisational Chart*, Jossey-Bass Publishers, San Francisco, CA.
- Sadri, G. and Lees, B. (2001), "Developing corporate culture as a competitive advantage", *The Journal of Management Development*, Vol. 20 No. 10, pp. 853-9.
- Scholtes, P., Joiner, B. and Streibel, B. (1996), *The Team Handbook*, Oriel Incorporated Publishers, Madison, WI.
- Senge, P. (1990), *The Fifth Discipline. The Art and Practice of The Learning Organization*, Random House, London.
- Senge, P. (1998), "The practice of innovation", *Leader in Leader*, Vol. 5, p. 9.
- Sharp, J., Hides, M., Bamber, C. and Castka, P. (2000), "Continuous organisational learning through the development of high performance teams", *Proceedings of 1st International Conference on Systems Thinking in Management*, Deakin University, Geelong.
- Sheard, A.G. and Kakabadse, A.P. (2002), "From loose groups to effective teams. The nine key factors of the team landscape", *The Journal of Management Development*, Vol. 21 No. 2, pp. 133-51.
- Stott, K. and Walker, A. (1995), *Teams, Teamwork & Teambuilding*, Prentice Hall, London.
- Syer, J. and Connolly, C. (1996), *How Teamwork Works. The Dynamics of Effective Team Development*, McGraw-Hill, New York, NY.

- Teare, R., Munro-Faure, L., Munro-Faure, M., Scheuing, E. and Bowen, J. (1999), "Modelling team structures: a grounded approach", *International Journal of Service Industry Management*, Vol. 10 No. 4, pp. 380-92.
- Thiagarajan, T. and Zairi, M. (1997), "A review of total quality management in practice: understanding fundamentals through examples of best practice applications – part III", *The TQM Magazine*, Vol. 9 No. 6, pp. 414-17.
- TNT United Kingdom (1998), *Kingdom Submission for the 1998 European Quality Award*, TNT UK Ltd, UK.
- Tuckman, B. and Jensen, M. (1977), "Stages of small group development revisited", *Group and Organisational Studies*, Vol. 2 No. 4, pp. 419-27.
- Van Der Wiele, A., Williams, A., Dale, B., Carter, G., Kolb, F., Luzon, D., Schmidt, A. and Wallace, M. (1996), "Self-assessment. A study of progress in Europe's leading organizations in quality management practices", *International Journal of Quality & Reliability Management*, Vol. 13 No. 1, pp. 84-104.
- Wallace, J., Hunt, J. and Richards, C. (1999), "The relationship between organisational culture, organisational climate and managerial values", *The International Journal of Public Sector Management*, Vol. 12 No. 7, pp. 548-64.
- Warne, L., Pascoe, C., Ali, I., Agostino, K. and Gori, R. (2000), "Social learning and knowledge management in the Australian Defence Organisation", *Proceedings of 1st International Conference on Systems Thinking in Management*, Deakin University, Geelong, pp. 631-7.
- Yin, R. (1989), *Case Study Research. Design and Methods*, Sage Publications, London.
- Zairi, M. (1994), *Measuring Performance for Business Results*, Chapman & Hall, London.
- Zigon, J. (1997), "Team performance measurement: a process for creating team performance standards", *Compensation and Benefits Review*, Vol. 29 No. 1, pp. 38-47.