Quality Management in Architecture and Building

Quality Teamwork and Leadership –
When One Boss is Not Enough and Two are Too Many!

By

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For many years, staff in design offices and architectural firms worked for one boss. With the advent of greater demands being made on architects over the last two decades, and the greater emphasis on project teams, employees have found themselves working for two or more bosses.

Such organizations are more dynamic and flexible but more complicated and potentially chaotic. For many staff this is challenging and stimulating, while for others it is confusing and often stressful. This challenge has been recognized by many companies across different fields as the 'matrix problem' and there are many vexed opinions about the effectiveness of various 'structures' or 'solutions'.

Unfortunately, many fail to see the problem does not have solutions or structures, and in fact it is not a really a problem at all, but a fact of modern business and management.

One thing we can be certain of, and that is the need for responsiveness and flexibility in project and quality management is not going to go away, especially while turbulent business conditions prevail through the global economy indefinitely into the future.

This chapter outlines some practical guidelines for effective organization, teamwork and leadership for dynamic architectural firms focused on quality with responsiveness and flexibility, at the same time as keeping staff committed, satisfied, creative and productive.

What are we really trying to do in organizing for quality management?

In modern organizations it is imperative to provide quality to clients and at the same time survive or thrive in turbulent business environments. You need to organize and operate your company so that it is:

- Client-focused and quality focused, and open to change and continuous improvement
- Responsive and flexible relative to clients wants and needs and the external market conditions
- Has clear defined objectives and responsibilities across its project and quality management

- Efficient in terms of the coordination of quality, cost and time, as well as scope and risk.
- Effective in terms of utilizing staff expertise, that is, the skills and experience of your staff, ignominiously referred to as 'resources'.

Over the last century there have been essentially three types of organizations in both commercial and public environments, including architectural firms, by either design or default:

- Traditional hierarchical, relatively common in institutional organizations such as banks and insurance and manufacturing companies, in which reporting is upwards in an orderly and sometimes bureaucratic control system.
- Laissez-faire styles, relatively common in creative environments such as design offices, where individuals typically react to the pressures coming from bosses or clients and there is little coordination and cooperation between disparate project groups.
- Matrix-style, relatively common in high-technology, defense, aerospace and IT organizations, as well as building and engineering design-build companies, where there are a high proportion of technical specialists who report 'vertically' to functional managers, and 'horizontally' to one or more project managers.

General Principles. The following table broadly compares the three types of organizations according to the five factors described above:

Factor	**Traditional hierarchical**	**Laissez-faire**	**Matrix-style**
Client and Quality focus	Internally focused, until client pressures prevail	Individually focused	Natural balance between client and quality focus and commercial imperatives
Responsiveness and flexibility	Slow to respond and resistant to change	Flexible but reactive to change	Fast to respond and flexible in approach, depending on leadership
Objectives and responsibilities	Simply defined vertically, and structured by policy and procedures	Typically unclear and chaotic	Negotiated vertically and horizontally by the leaders
Efficient coordination	Efficiently controlled by bureaucracy	Hap-hazard, ad hoc	Efficiently planned and coordinated by leaders
Sharing of expertise	Minimal sharing of resources	Ad hoc sharing of resources	Planned and continuous

The traditional and laissez-faire organizations have the distinct advantage of simplicity, but are less responsive to continual improvement and change.

More importantly, the reality of the modern business environment is that all organizations have to cope with the problem of sharing scarce or costly resources between projects — in our case, skilled designers, architects, engineers or other specialists. For the last two decades, it has been simply impossible or too costly to allocate these people to a particular single project, one at a time.

The old cliché that 'no one can serve two masters', was overturned by the dictum that 'all staff must be prepared to serve more than one master'.

Today, every person in the team has to either enjoy, tolerate or cope with the reality that one boss is not enough and two might be too many. My observations over more than two decades is that most people thrive in these conditions because of the stimulation and career opportunities, but a minority find it quite difficult and personally threatening. This then becomes a leadership issue.

You might discern from what has been said so far, that the success of matrix-style organizations is relatively more dependent on effective leadership. This is certainly the case, and this can be said to be both a strength and weakness. More on leadership later.

Some examples. A snapshot of part of a small architectural and engineering practice of some 10 to 20 staff managed informally along matrix lines looks something like this:

	Sue Smith, Architect	Tom Burns, Architect	Joe Jones, Draftsperson	Angela Hicks, Interior Designer	Peter Hill Quality Coordinator	Paul Moore, Engineer
Project 1	✓✓✓		✓✓	✓	✓	✓✓
Project 2				✓	✓	
Project 3	✓	✓	✓	✓✓	✓✓✓	
Project 4		✓✓✓		✓✓	✓	✓

The ticks indicate that the person is working on the particular project, and the number of bullets are an indication of the relative priority for that individual.

This indicates that Sue Smith, an Architect, is concentrating on Project 1 but has some involvement in Project 4. The draftsperson may working on project 1 but helping with some sketch designs on Project 3, and so on.

A larger design-build company of perhaps 50 staff, may look something like this:

	Quality Department	Architectural Department	Engineering Department	Procurement Department	Contracts Department	Construction Division
Project A	🧍	🧍🧍🧍	🧍🧍	🧍🧍	🧍	

Project B	•		• • •		•	• • •
Project C	• •	• •	•	•	• •	
Project D	•	• • •	• •		•	• • •

Here the bullets indicate the number of people working on the particular project. (AUTHOR NOTE: Symbols are meant to be stick figures (webdings)

Your organization

If you are reading this book, and involved in a project-focused and turbulent business environment, it is highly likely that your firm is already being run to some degree along matrix principles, either by default or design. So this matrix concept is really just a set of practical guidelines, and not a new gee-whiz idea, gimmick or esoteric management philosophy.

Managing and leading a modern matrix-style organization requires some discipline, commitment and commonsense, not rocket-science.

Exactly how you do this will depend on your particular firm and business environment and your broad quality objectives, but some basic practical guidelines are described following.

My guidelines and comments are addressed to the overall team leader, or the head of the architectural firm, but the same comments apply in principle equally to the project leaders and all team members.

Be clear about your principles. If you are the manager or leader, be clear within yourself and with others about the general principles of your organization in terms of the five dimensions I explained above, and the relative priorities of each.

If client staff are involved in project teams, you will need to recognize the uniqueness of the project organization. Although the parent organizations — those of your client and your own — are ongoing, project team members will almost certainly not have worked together before. New relationships, procedures, means of communication and trust have to be established with each new project.

Establish a common understanding in your company as to the formality or informality of the organizational style. While bureaucracies exemplify highly formalized organizations, and many entrepreneurial organizations are laissez faire, effective matrix organizations usually fall somewhere in between. Some would say this is the culture and values of the organization, and it also involves the internal ethics, or ethos of the company.

Minimize complexity. Matrix-style organizations can appear to be more complex to understand and operate than the other two styles. This is only the case when there is a lack of overall direction and leadership.

Poor leadership and management increases complexity and inevitably causes difficulties in monitoring and controlling projects; in the flow of information between team members; in delays in decision making because of the negotiation required and the possibility of conflicting instructions and guidance.

Sharing expertise does create some complexity. Thus it important to minimize complexity, and resist the temptation to be clever or sophisticated in inventing systems or procedures to cope with it. I have seen many vain attempts to draw up an 'organization chart' of a company trying to incorporate a matrix type philosophy as a traditional hierarchical structure – the result is a chart that could be mistaken for a switchboard circuit diagram, or a can of worms.

If you are like me and don't like the gimmicky sound of the term 'matrix' then you can invent another name that encapsulates the goals, mission, spirit or culture of your company. Alternative names could be 'PDP-Organization' for Planning, Deliverables and People, or C3 for Communication, Coordination and Commitment, for example. I know of one company, Jones and Company, that just called it the 'Jones Way'. If you are an effective leader, maybe you don't even need a name — it's *your* way. Or better, *our* way.

Efficient Management

Objectives and Responsibilities. As a manager, you need to define goals and allocate responsibilities on a regular basis, such as a the regular coordination meeting on a Monday morning. Doing it once is not enough in a dynamic environment focusing on quality.

Both project leaders and team members need to have clear definitions of project objectives in terms of quality, cost and time and functional technical objectives as well if necessary, so that all team members are working to common goals.

Someone — either the project managers, or the overall manager — needs to regularly allocate responsibilities and set objectives for all project team members. Again, once is not enough.

Job descriptions are necessary to formalize the employee's relationship to the company but these do not describe the particular responsibilities for the deliverables for each project.

Planning, Deliverables and People. As a manager you need to clarify and agree on exactly what your project or design deliverables are on a daily or weekly basis. "Deliverables" is a term borrowed from the military, and these are the discrete parts of a major project along the various supply chains, ranging from drawings, contract documents, specifications, quality plans through to the bricks and mortar, internal services, finishes and fittings of the physical building.

You need to ensure there is agreement amongst the project team who is responsible for each of the deliverables. Decide who is going to be responsible overall as Team Leader.

You also need to ensure that the deadlines for deliverables amongst the project team, and the timeframe for all important tasks are agreed. Divergent assumptions creep in all too easily.

Communication, Coordination and Commitment. Clear lines of communication between all individuals in the team are required. It is obviously impractical and inefficient for everyone involved in each project to know "everything about everything" and it is the

responsibility of team or project leaders to ensure that everyone receives the information they need.

Matrix-style organizations different from the traditional in requiring more attention to the two-way flow of information. You need to provide for clear channels of horizontal and vertical information flow in whatever form is appropriate — meeting minutes, emails or paperwork.

Efficient Teamwork

According to some experts, the best teamwork comes from "motivation", "culture", or leadership. The most basic element of teamwork is cooperation directed to pursuing the common goal, as distinct from peer-to-peer competition.

There have been many books written on teamwork over the last four decades and there is a wide range of advice as to what can be done to encourage teamwork in organizations. But research indicates that in the construction industry at least, the most important contribution to effective teamwork is simply down-to-earth planning and coordination. Whether you are project leader or team member, here are seven commonsense guidelines:

- Make sure you are clear on exactly what the **objectives** of your project are, and exactly what the client expects to get out of the project in terms of quality, cost and time.
- Get clear on exactly what the project **deliverables** are — this is not always as obvious as you think, especially in matrix-style organizations where things are constantly changing
- Agree amongst the project team **who is responsible** for each of the deliverables. Decide who is going to be responsible overall – the Team Leader. The responsibility for quality is particularly important to define, because in some cases the Project Manager may be responsible, in other cases, the Quality Manager
- Agree the **deadlines for deliverables** amongst the project team, and the **timeframe** for all important tasks
- Get commitment for the required **expertise** and any non-human other resources, such as hardware or software, from the Team Leader or from those supplying these.
- Work diligently towards an efficient, timely and defect-free **completion** of each of the deliverables – with competing priorities from different projects, it is easy for the quality of some deliverables to be compromised
- After handing over each deliverable **be ready to support** the next person carrying it on. This may mean briefing your colleague on the main issues and answering any queries, rather than 'dumping your stuff over the wall' of the next department.

Motivate individuals. Even after efficiently applying the seven guidelines of coordination, there are many errors, oversights and omissions. Why? It is easy to forget that teams are compromised of individuals. Motivation means interest and commitment.

According to the experts, setting appropriate accountability measured against realistic and mutually agreed performance yardsticks is a common management strategy but it is difficult to define performance in a creative environment. Instead you can make

individuals accountable for achieving the quality, cost and schedule of the deliverables and reward them appropriately for achievements.

One of the advantages of matrix-style organizations, is that project results are more visible and, according to behavioral scientists, this promotes individual interest and commitment, and contributes to high morale and productivity.

Your company will profit by attempting to satisfy individual needs, as far as this practical. Failure to satisfy individual needs can result in apathy, alienation and low productivity. Dissatisfied individuals can sooner or later be found to be working perversely in opposition to project and company goals. Preventing this is a part of the effective leadership, reviewed in the next section.

Effective Leadership

Understand and commit to first principles. After decades of neglect, the topic of leadership is now in vogue and in the last ten years there has been something of an explosion of interest, as evident from the large jump in the number of books written on the subject. These books range from dry theories of leadership models, traits and behavior, debates as to whether leaders are 'born' or made', to motivational "how to" books with an almost religious fervor. This should not deter us from agreeing a few basic commonsense principles.

Management academic John Kotter was one of the first to propose that management and leadership are different and complementary. He defined management as "coping with complexity" and leadership as "coping with change". This is a helpful definition for matrix-style organizations that have to respond and not just cope with both complexity and constant change.

In plain words, management is about 'doing', leadership is about 'directing', and teamwork is about cooperation. Management and teamwork performance can be measured in terms of efficiency and leadership performance in terms of effectiveness.

Whatever your understanding is, commit to it, rather than give it lip service or espouse rhetoric. In other words, be prepared to practice what you preach.

Promote improvement and change. In dynamic organizations, it is the leaders' role to promote a culture of continuous improvement and constant change.

Compared to usual business organizations, project and matrix organizations are inherently unstable and must have the capacity to change as projects progress through their life cycle — birth, infancy, adolescence and maturity — to final completion. The leader must take charge of this change.

If the both of the firm and the projects do not work towards continual improvement the organization and staff will languish and stagnate and become inflexible and unresponsive.

Manage conflict. Competition between project leaders for expertise and the pressure to respond to project imperatives are the two most common causes of conflict, that require frequent guidance or intervention by senior managers or leaders.

It can seem like there is a constant struggle in balancing goals and objectives of project and technical management, the most common one resulting from project managers putting undue emphasis on time and cost restraints and technical managers being overzealous in achieving 'perfection' or technical excellence.

When demand for company services is high, there is a lot of potential for conflict between project managers competing for resources, usually people, and in individuals having two bosses. Obsession with power and competition, rather than healthy competition and cooperation, can cause high stress levels and organizational degeneration.

Leaders must manage emotional conflict or stress effectively. Although conflicts and stress are inevitable, managers must be committed to minimizing these, or at least direct these energies in a constructive way so that motivation and morale remain high at all times.

Eliminate politics. Organizational or 'office' politics are defined as the tactics of individuals to promote their self-interest ahead of the company interest. Some so-called experts say that a degree of office politics are inevitable or beneficial, but this is not supported by research. To the contrary, research shows that in dynamic business environments, organizational politics are typically associated with poor company performance and can be fatal for the company.

The main cause of organizational politics is ineffective leadership. Company or project failure is rarely due to the organization itself, rather, it is a usually a result of a leadership vacuum, in addition to lack of practical coordination at the work-face.

Poorly organized and led matrix-style organizations are characterized by high levels of politics. As staff work for two bosses, there is the possibility of either the individual becoming the "meat-in-the-sandwich" or playing one boss off against the other, for example.

Research indicates that strategic leadership, that is the kind of effective leadership described in this section, is the diametric opposite to charismatic or political leadership and considerably more effective in terms of company performance.

Nurture and develop expertise. Leaders need to nurture and develop the expertise and skills of your staff with the appropriate on-the-job or classroom training, coaching or mentoring. This means all your staff, but make sure that any exceptional people are provided sufficient challenges to keep them involved, motivated and creative.

One distinct advantage of matrix organization is that the cancellation or completion of a project is not a cause of underlying anxiety to individuals otherwise monopolized by the project, and also not traumatic to the company.

Career development opportunities in project management can be provided for those working in technical areas, and vice versa.

In recruitment try to determine the individual's interest or capacity for constant change and the ability to work in teams for two or more bosses, and take these into account along with the other myriad factors when selecting employees.

Acknowledge human capacity. Leaders must do their best to understand and respect the human capacity — the strengths and limits — of their staff in terms of their individual professional, technical or interpersonal capacities. Often this understanding comes too late — from bad results or experience, so leaders must acquire the insight to anticipate success and failure.

Staff who act as either project or team leaders must be able to perform satisfactorily under high stress levels. They must be emotionally resilient.

Pressure on valued team members, and the resultant stress, tends to peak and trough, but if it is relentlessly constant, there is a problem with the person or the organization.

You should always seek the cause in the organization first, before looking for blame or shortfalls in the individual.

The success of matrix-style organizations depends a lot on the direction and diligence, that is, leadership, of senior management and also on the project and the maturity and skills of team members to be able to carry through. As far as practical, the project manager should have some say as to who is in his or her own team.

Be a diligent and responsive leader. In books you may read about particular leadership styles ranging from autocratic, to consensual or permissive, for example. Avoid artificial leadership styles, simply do your best to be responsive, rather than reactive or manipulative, to each situation.

Being personally diligent means being attentive to as many of the variables impacting on your project and your quality management. It is only human and all too easy to be distracted by political, personal or esoteric technical issues.

Being personally responsive means taking into account all the known variables relating to quality, cost and time. In other words, *be* an effective leader, rather than just theorizing about it, indulging in rhetoric, or attempting to imitate charismatic leaders.

Consider the truth and consequences

What does all this mean in terms of quality management in your company or practice? The following table shows the general impact on the various dimensions of quality management:

Quality dimensions	Quality leadership and teamwork organization	Ordinary organization
Objectives	Real commitment to objectives and strategy	Lip service to objectives, no defined strategy
Planning	Responsiveness and flexibility	Reaction to quality pressures
Implementation	Systematic accomplishment through cooperation	Ad hoc compromises from competition
Delivery	Minimal defects and rework	High defects and rework

If you are a leader or a team member, you need to decide what the truth and consequences of quality leadership and teamwork are for your particular organization, project, company and staff.

Institutionalize your guidelines. Finally, write down the guidelines in a concise and easy-to-read manual, covering management, leadership and teamwork aspects. This can be also used for induction, training and project partnering arrangements.

Summary

Dynamic architectural firms focusing on quality need to need to be flexible and responsive. While there is no single structure or solution that is universally the best. There are no silver bullets, or slick formulae.

The matrix-style organization is not so much an organizational structure but a set of principles and guidelines. These must be appropriate to your company objectives, the particular project objectives, the leader and the team.

Here is a summary of my seven quality guidelines for the teamwork and leadership of matrix-style, or for that matter any style of organization, in a dynamic business environment.

Teamwork		Leadership
Regularly clarify the **objectives** of your project.	**1**	Commit to understanding what it means to be an **effective leader,** and *be* one
Agree exactly what the project **deliverables** are.	**2**	Promote a **culture of change**, rather than bureaucracy or chaos
Agree amongst the project team **who is responsible** for each of the deliverables.	**3**	Minimize or **eliminate politics** and encourage career development
Agree the **deadlines** and the **timeframes**	**4**	**Manage conflict** constructively and dispassionately
Get commitment for the required **expertise**	**5**	Nurture and develop the **expertise** and skills of your staff
Work diligently towards an efficient **completion** of each of the deliverables.	**6**	Know and respect the **human capacity** of your staff
After handing over, be ready to **support** the next person	**7**	Aim to be personally **diligent and responsive** rather than distracted and reactive.

Ignore these practical facts of your business life and I suggest you will be jeopardizing the quality of your projects, as well as the future of your company and staff. These are not esoteric principles.

Further reading

The following are some representative examples of the many books published on leadership and teamwork.

Barker, Carolyn, Editor. *The Heart and Soul of Leadership*. Sydney: Australian Institute of Management/ McGraw-Hill Australia: 2002

Collins, Jim. *Level 5 Leadership — The Triumph of Humility and Resolve.* Harvard Business Review, January 2001.

Eisenstadt, Kathleen and Donald Sull. *Strategy as Simple Rules*. Harvard Business Review, January 2001.

Engel, Peter. *The Exceptional Individual — Achieving Business Success One Person at a Time*. New York: St. Martin's Press, 1998.

Kotter, John. *What Leaders Do.* Breakthrough Leadership, Harvard Business Review. December 2001.

Maxwell, John. *The 17 Indisputable Laws of Teamwork.* Nashville: Thomas Nelson, 2001

Maxwell, John. *The 21 Indisputable Laws of Leadership.* Nashville: Thomas Nelson, 1998

Strazalowski? TQPM book (sorry can't find the ref)

About the Author

Paul Hinkley is a qualified civil engineer, a graduate from the University of New South Wales. He is a Foundation Member of the Australian Institute of Project Management, Certified Management Consultant and Registered Psychologist. He has some three decades of hands-on and consulting experience in the project and quality management of building, engineering, environmental and IT projects in Australia, Canada, Japan and the UK.