

Advances in Project Management Series¹**Social Process for Project Leaders²**

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A project involves a group of people who are assigned to work on a special task instead of, or in addition to, their normal work load. A project is created to give concentrated attention to a task of limited and specific duration which may require interdisciplinary skills and experience or expertise from various organizational units or even different organisations.

Projects come in many different sizes and shapes. There are large construction projects that involve hundreds of people from a variety of trades. There are small group projects such as Process Improvement Teams (PIT) which may have only 3 people with the authority to call on special expertise within the organization when needed.

There are, of course, many sizes between the extremes as are differing times to completion from a few months to several years. Despite their differences they all have several things in common. To have a successful project all three organizational domains -- technical, commercial, and social – must be taken into account. Most organizations are pretty good at the first two; but leave a lot to be desired on the social processes in human interaction.

Systems Leadership Theory has been developed to provide a set of coherent models to assist in understanding the social domain including the culture of and behaviour in organizations. It is a coherent and integrated theory of organisational behaviour based on over fifty years of worldwide research across many organisations and cultures. It has a clear leadership model that is also directly related to a theory of human capability that in turn is related to structure and systems. These ideas have been applied in a variety of organisations and projects in countries around the world and have led to successful project outcomes.

The entirety of the theory cannot be covered in one short paper; for this we refer you to the book, *Systems Leadership: Creating Positive Organisations*, 2nd ed. (Macdonald, Burke

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and Stewart, 2018). Briefly, the theory begins with a model of core shared values which are found in all human societies. These values of fairness, honesty, trust, respect for human dignity, courage and love are the values that hold human social groups together. Different individuals and groups have stories (we call them mythologies because these are stories that carry a fundamental truth even when the specifics are fanciful) that demonstrate what is fair or respectful or courageous. Groups that share common mythologies have what we define as a common culture.

One of the potential difficulties in project work is that members of the project team may have differing mythologies and therefore may view certain leadership behaviour as unfair or disrespectful, even if that is not the intent of the leader nor seen in the same way by others on the team. It may take some time, but the leader must learn the mythologies of each member of the team and be able to see the world from each team member's viewpoint if the project is to be successful.

There is also an essential need to recognise the complexity of the project in order to assign a leader who is capable of handling such complexity. The work of Wilfred Brown (1960; 1971), Elliott Jaques (1976, 1989) and others Jaques ed. (1978), Macdonald (1984), Stamp (1978), Burke and Smith (1992) demonstrates the development of the ideas of levels of work as does Chapter 9 in *Systems Leadership* (2018). We have found that most, but certainly not all, projects can be led at the 3rd, 4th or 5th level of complexity. A few, like the Manhattan Project to develop the atom bomb, may require at least the 7th and possibly the 8th level of capability in the leader.

When the leader is at too low a level, or the project is not well defined, many things can go wrong. The poet Robert Burns was not thinking of projects when he wrote, “*The best-laid schemes o' mice an' men gang aft a-gley, An' lea'e us nought but grief an' pain For promis'd joy,*” but as shown in the example below, he anticipated what can happen to a Project Leader.

“That was the worst experience I've ever had.” I was speaking with Tim, a young IT programmer, who was deemed ready for a managerial position which needed to be filled immediately. He had turned it down emphatically, and as an external consultant, I was asked to find out why and to perhaps learn what the organization could do to persuade him to take the role.

We had a lengthy chat over tea in one of the company's cafeterias. The line quoted above was the last thing he said about the experience he had had with ‘management’.

At the time I started working at this corporation, they had a policy of trying people out to see how well they would do as a manager by giving them a significant but short ‘project,’ usually with a three to nine-month deadline. In this way, it was believed, their managerial skills could be tested. The

newly appointed ‘project manager’ was told what he or she was to accomplish but was given no explicit authorities or resources, although there was sometimes a suggestion that he could ‘take’ up to three of his co-workers to work on the project. Part of the test was to see if the person could figure out the authorities and find the people to work on the project and also complete it on time.

According to Tim, the way this was done was to call on your friends, especially those where you had helped them on their ‘projects’. To do this, his friends had to sneak time from their own work without telling their managers, and try to get the work done, often after hours. Tim needed a person with special expertise, whom he knew by reputation, but was not a close friend. The specialist was friendly but said he had no time to help, “Sorry.” Tim felt he had no authority to ask the specialist’s manager to allow him to work on Tim’s project. In addition he had no authority to reward his ‘staff,’ and he had no authority to assign them tasks. It all had to be negotiated on a you help me, and I’ll help you, basis.

One of the big problems was the inability of Tim to get things done through his friends who were also busy with other work assigned by their managers. He didn’t feel he could ask for help from these managers, so he rewarded his friends with pizzas and drinks when they were willing and able to stay late to work on the ‘project.’ Some would promise to have one part of the project done at a certain time, but then failed to meet the promised deadline.

In the end, Tim worked very long hours with the help of one close friend and they completed the project. It lacked certain elements because the specialist’s knowledge was not available to Tim, but it was deemed a good effort thanks to Tim’s fine social process skills. At the end, Tim was exhausted, had lost a couple of friends who had abandoned him during the project, and swore NEVER to do something like this again – to NEVER become a manager.

Manager and Project Leader Roles

Now testing for managerial skills, especially social process skills, by having someone manage a project is not a bad idea. When done properly, it can be a good opportunity to teach someone about what it is like to take accountability for the work performance of others; to assign tasks, to review and recognise performance (good and bad). To do this, however, it is necessary to be clear on exactly what a manager is and must do, as well as how project management may differ from management in general.

To sort out Tim's problem and to inform the leadership of the corporation on better ways to prepare people for management, it was necessary to begin by clarifying terms, so we could all agree upon what we were talking about. For example, we defined a **manager** as a person who is accountable for his or her own work and the work performance of people reporting to him or her over time. Using this definition, it becomes clear that a manager is, and must be, a leader of people. The manager will be either a good leader or a bad leader, but he or she will, inescapably, be a leader.

A managerial role is essentially an open-ended structural role with a particular position (one level of work higher than his or her direct reports) and a set of authorities and tasks. In order to lead people effectively and accept accountability for their work performance, it is necessary for a manager to have certain minimum authorities – the VAR³I authorities – which define the managerial role.

V Veto appointment to the role – that is, no one should be appointed to the team against the wishes of the manager.

A Assign tasks – the manager assigns work to members of the team and anyone else who wishes to assign work must clear it with the manager.

R³ Review, Recognize, and Reward – that is, the manager has the authority to review the work of team members and to give appropriate feedback both positive and negative (recognition) and make financial changes in the form of a salary and/or performance pay.

I Initiate Removal from Role – here the manager, after due process, can require the person to leave the current role and the team if necessary. This is not the same as dismiss, as the person may be suitable or acceptable for another role in the organization to be determined by the Manager's Manager (M+1).

We define authority as, "the exertion of will in the context of the mutual acceptance of agreed limits." As such authority is never without limits. There are both external and internal constraints on the authority an organization can grant to its managers, including law, regulations, organizational policies, boundaries of the role, etc. Some people may also exercise power defined as "the exertion of will while breaking one or more limits of authority." Power based systems alienate a large part of the work force and are counter-productive. Systems of authority show respect for human dignity, drive out unauthorized power networks and thus release tremendous energy for productive purposes.

No matter what the laws or policies state, however, no one has authority unless the leader's direct reports accept it. To be fully accepted as a leader requires a good understanding of the universal values, mythologies and cultures as demonstrated by his or her behaviour and systems.

A Project Leader role differs from that of a manager in that it is not open-ended; it ends at the completion of the project when each individual returns to his or her regular position. A project may be part-time or full-time and involves leadership skills that require clear authorities and tasks but are not the same as an open-ended managerial role. It is time limited and has specific authorities.

VP Veto Selection to Project Team. The project leader carries the authority to veto the selection of people to the project team.

A± Assign Tasks within Agreed Upon Limits. This authority is similar to that of the Manager, but in this case the additional limits are imposed by the project leader's and team members' managers. The agreed limits apply for the duration of the assignment to the project team although they may be renegotiated if demands of the work or the work environment require changed limits.

R^{2±} Recognise and Review Differentially within Agreed Upon Limits. Again, the authority to assign work and the authority to recognise differentially must be commensurate. As with the authority to assign tasks, the limits to the authority of the project leader to review and recognise differentially are set by the project team member's manager. The Project Leader may also have the authority to recommend financial reward to the team member's manager.

RP Remove from the Project Team. The project leader has the authority to remove a project member from the team. The project team member returns to his or her previous role and organizational unit upon the exercise of this authority by the project leader

Project Leader authorities apply in the relationship between a project team leader and a project team member who is not a subordinate of the project leader in the normal organization structure but is specially assigned to the project team. The project team member remains the direct report of his regular manager. Project team members may work in the same work stratum as the project leader or they may work one or more levels above or below the project leader. The project leader usually does *not* have the authority to alter salary, although his or her input on work performance may be important information to the project team member's actual manager. It is important that the project team member is informed of the limitations that apply to the project team leader's authority.

Whether a Manager or Project Leader, the person will need additional authorities which may include a right to spend money (budget), to have access to information, to allocate resources, to sign contracts, to have the facilities necessary to carry out the project, and perhaps other authorities specific to the project. The Project Leader needs to have the authority to speak with the managers of his project team members and to seek the

assistance of his own manager if that is needed to deal with managers at that level or higher.

The authorities on any given project may be more complicated as the leader may have two different authority regimes in relation to different members of the team. Some team members may be his or her direct reports, while others may be the direct reports of the other managers. In the first case, managerial authorities will apply; in the second project leadership authorities will apply. These differences need to be understood by members of the team and require considerable social process skills from the Project Leader.

Getting it Right

So what went wrong in Tim's situation? A lot, you say; obviously this type of 'project manager' role is neither a managerial nor a project leader role. It is simply a mess, and no one who reads this journal is likely to make so many mistakes. Nonetheless, we have known organizations which have created managerial roles almost as poorly structured as this example; they typically have high turnover. Back in the day they found themselves discussed on 'f.ed company'; and may be driven out of business.

Because we have had to deal with human relationships from the time we are babies – getting Mom's attention when we are hungry, or the diaper is full – up through getting along with others in school and later on the job. Thus we have our own ideas about human behavior and relationships based on experience. Suggesting that some of these ideas may not foster good working relationships, or are simply wrong, can be quite threatening. Therefore we have stressed the need for clear definition of terms, so we can agree about what it is we are discussing.

To Begin. A project is like a task, and if it is to be carried out effectively, task (or project) assignment must include the following:

Context -- the situation in which the project will likely be performed, including the background, relationship to other tasks and/or projects, and any unusual factors to be taken into account. What might be the opportunities, risks and threats?

Purpose – Why this project. What is to be achieved by accomplishing it.

Output – What is to be produced stated in terms of Quality and Quantity.

Resources – Defined in terms of cost or resource use. Other resources include people, authorities (including the authority to speak with and ask for resources from specific managers other than his own), access to information, facilities and assets assigned to facilitate completion of the project.

Time – The targeted completion time – a deadline indicating when the project is to be completed.

Poor Tim had none of this except the ‘what’. He was told what was to be done, but without clear information on quality and quantity. The rest of the essential information he had to surmise, and of course he was provided no clear authorities or resources. When assigning a task or project it is essential that it be a two-way conversation. This ensures there is no confusion about the key information, and it also allows the Project Leader to discuss any issues or questions with the manager when it is assigned and later as need arises. Tim had not felt he could do that as it would have shown he did not know what he believed he should have known to get the opportunity.

In some cases the Manager may be clear on the what is needed and why (the output and the purpose), but the selected Project Leader has expertise the manager lacks. In this case the project may be assigned in two (or more) steps. The first step being to learn what would be needed to achieve the purpose and then for the potential Project Leader to lay out a project plan including whether the purpose can be achieved given the output desired. Such a plan could also estimate time to completion, the quantity and quality of output achievable in that time frame and the resources (including authorities) likely to be required to complete it. The Manager and Project Leader can then discuss whether or not the plan is likely to meet the Manager’s purpose and if adjustments are needed. While the Project Leader may propose what is to be done, the decision to go ahead is up to the Manager.

If the project task is clearly stated in terms of C-P-Q/Q-R-T, the outcome is more likely to be positive. The Project Leader will also be able to accept accountability for the outcome of the project and be able to answer the following questions:

What did you do?
How did you do it?
Why did you do it that way?

Team Leadership and Team Membership

The Project Leader must have good social process skills – the ability to interact with others at work to produce a productive outcome. This is where Systems Leadership Theory, which focuses on human social processes and relationships, can help.

The importance of social process skills has been demonstrated in several studies of team success (or lack thereof). Woolley (2010:686-688) led a team from MIT and Carnegie Mellon that found one of the key factors in team success was “high average social sensitivity.” “They were skilled at intuiting how others felt based on their tone of voice, their expressions and other nonverbal cues” (Duhigg, 2016a).

Beginning in 2012, Google began Project Aristotle, conducting extensive research to learn why some teams perform very well and others less so. They identified “psychological safety” as key to team performance -- people listen to each other and show sensitivity to each other’s feelings and needs (Duhigg, 2016b). Research also indicates the importance of clear understanding of the purpose of the team and the impact of their work.

This research demonstrates the importance of social process skills in the success of teams. Of course, people are both social creatures who form groups to achieve together what we cannot achieve as individuals, yet remain individuals, with individual needs. There is, and always will be, potential tension between what is advantageous for an individual and what is advantageous for the group. The key to a good organisation is managing the social process so that individuals are encouraged and allowed to use their capability to achieve the overall purpose of the group, yet are also recognised for their contributions as individuals. The individual gains personal satisfaction and reward whilst achieving the common goal.

Of course some Project Leaders will be better at this than others, but people who are qualified to be a Project Leader can learn to be more effective at leadership. While there is considerable literature around the issue of ‘born’ leaders, or the personality required to be a leader, in our experience it is at best pointless, and at worst dangerous, to ask people to change their personalities. You can, however, ask someone to state context and purpose and explain tasks clearly. These can be observed, recognised and improved.

A clear definition of a project is given at the beginning of this paper. We have defined a team as a group of people, including a leader, with a common purpose who must interact with each other in order to perform their individual tasks and thus achieve their common purpose. A project may be made up of one or more teams.

While there has been much hype regarding Agile and Scrum wherein there is no leader of a team. Our work in countries all over the world suggests that all teams will have a leader whether by appointment, election or simply bullying (exercising power rather than authority). We recommend that Project Leaders be appointed by their Manager, who should be in the best position to know the level of work required and the skills needed by the Project Leader.

This does not mean the Project Leader is an authoritarian ‘boss’ as that is commonly understood. To have an effective project and social process, the relationship between a team leader and team members is mutual. The leadership role and the membership role complement each other. Each has contributions to make if the project is to be completed

successfully. The subtleties of these relationships cannot be conveyed in a short paper but are discussed more fully in Chapter 15 of Systems Leadership, 2nd ed. (2018).

Remember in Teamwork, you are part of the whole. It is only by active co-operation, however, that the whole will be greater than the sum of the parts. The steps and traps of a Team Leader and Team Members that are described below should be seen as authorities. Many organisations that have adopted this model require these steps from both leaders and members whether in managerial or project leader roles. They are part of work reviews and performance assessments.

This demonstrates that, even in an executive hierarchy, authority does not simply flow downwards. Team members have the authority to require the leader to be clear about context, purpose, tasks, etc., and can demand a review. There is a clear and proper flow of authority upwards. Also, team members have authority with regard to each other requiring collaboration, information and feedback. This approach confounds the simplistic assertion that hierarchy is, by its nature, ‘authoritarian’ and that teams must be wholly democratic. Good team leadership provides the order necessary for effective and efficient progress. A false democracy does not.

In brief, the steps needed to be taken by the Project Leaders and Team Members are enumerated in Table 1:

Table 1: Complementary Authorities of Leaders and Team Members

Leader	Member
Explain context and purpose	Clarify context and purpose
Identify critical issues	Contribute to the ‘how’
Encourage contributions	Listen
Make a decision about the plan	Accept decisions concerning which plan
Assign tasks	Clarify tasks, ask questions
Monitor progress	Co-operate
Coach	Accept coaching
Review	Demand review
Avoid traps	Avoid traps

Some of these are self-explanatory, but others need a bit more fleshing out. Critical issues are those things that threaten the purpose of the project. Potential significant problems that must be overcome for the Project to be completed successfully. Most leaders need help in order to identify critical issues and contributions to their solution. Not listening to others and therefore implying they have no contribution to make is almost always a mistake.

Identifying and resolving critical issues is best done in an orderly process where a potential critical issue is put forward and members of the team as well as the leader take time to think about proposals for resolving it. Such thought processes may lead to a recognition that the issue identified is not critical, or if it is, various proposals may be put forward, and the leader must decide which if any have merit. This process continues with each critical issue as it is identified, and solutions proposed.

Team Members have work to do to put forward their thoughts about the problems and ways of solving them. Any member may identify what appears to be a trivial point that turns out to be crucial. It is for the leader to decide in the end what is relevant. It is not only the leader who pays attention to the social process. Timing is critical if you want to be heard. Be available and accessible within the leader's sight. Don't give up if not heard initially. However, do not continue to press a point if it has been recognised.

While it is important to make a contribution, it is equally important to listen to other points of view. It is difficult for the leader if all members are switched to send and none to receive. You may find this difficult especially if you think others are making apparently silly or trivial suggestions or ideas you had already thought of and dismissed. Listening is really hard work. It is not a passive process.

The Project Leader must take all this in and make a decision on what is to be done. Leadership is not a matter of democracy or consensus. In a leadership role, your position in the role is based upon your perceived capability to make decisions and your role is accorded the authority to do so. When team members have had a fair go, they must accept the leader's decisions and commit to the chosen path even if one's worst enemy has had his or suggestions accepted.

The Project leader must Assign Tasks using the C-P-Q/Q-R-T model. To back this up and embed this process in the team, team members must clarify their tasks if they are uncertain about what their tasks are – and what to do next; if and how their tasks complement other people's tasks and how their tasks will help to achieve the purpose and overcome problems – *why* they are doing these tasks. Team members must work to complete their tasks and cooperate with others. For example, do not hide information or use it to exercise power.

As the project moves forward, the Project Leader must monitor Progress along several dimensions (at once):

- a. *Technical* (the most obvious): Are the solutions working? Do they need to be modified? Will the methodology/plan actually solve the problem?
- b. *Social*: Is the team cohesive? Are people involved, using initiative, interacting or are they forming sub-groups, fragmenting, only doing

‘what is necessary’? Do they look interested? Engaged?

- c. *Temporal*: Is there a programme, a timetable/ schedule? Is it being achieved?
- d. *Environmental*: The *leader* does the work of monitoring the environment, allowing team members to concentrate on the task at hand. What is happening around the team and what intervention is required to help overcome problems?

Ultimately, if any or all of the above are going wrong, what contingency plan does the leader have? Can he or she answer this *before* a problem arises, even if only in outline? Here the leader may have to revisit critical issues, stop the process and re-evaluate.

The Project Leader is also a Coach and Team Members are expected to accept some coaching. As team members work they may need help to complete their tasks or improve their methods. Leaders are helpers. This is a very sensitive area because the *way* in which a leader coaches will affect whether people will accept help. First, a leader must make it clear to the team member whether he or she is:

- a. *Giving an instruction* – telling someone to do something differently and expecting them to do it.
- b. *Giving advice* – suggesting a person think about using your ideas but leaving it up to them.
- c. *Teaching* – showing/telling someone how to do something because they recognise that they don’t know how. This area is critical to a leader as few people like being told how to do something while they are in the middle of work unless they think they are having problems. Consequently, do not be afraid to ask.
- d. *Asking* – gain information from members: for example, why do you do that? Do you want any help?

Although an important part of the leader’s work is coaching, do not forget the leader may well learn from the team.

Finally, the process and outcome must be reviewed; what has been done to date in longer projects, and at the end of the project. The Project Leader and Members must discuss whether the purpose has been achieved or not and the process with the team. This is the opportunity, when everything associated with the task is still fresh in people’s minds to give recognition (positive and negative) to team members and to comment on

the leader's perception of his or her leadership behaviour, in particular, those things that were not done as well as they might have been. If the Project Leader does not initiate the review, the Project Team Members have the authority to demand such a review.

It is very important for a leader to draw out the views of team members, a process that will usually be easier if the team has been successful than it will be if the outcome was poor. It needs to be done, however, if all of the team is to learn from the experience.

The social process of these reviews will determine, to a large extent, how successful they are at engendering improved work performance. It is vitally important to recognise people's work and to encourage individuals and the team to learn from what they have done – what they can build on and what they need to change. We all benefit from knowing if we have achieved our purpose

Traps for Team Leaders

A leader can make many mistakes and the majority of leaders will make some. The same is true for team members. The traps for leaders and for team members are not complementary as in the steps. In our experience these are the most common traps for the team leader.

- a) Not seeing the problem from the member's viewpoint
- b) Getting over-involved in the action. Taking over a team member's work not only annoys the member, it prevents the leader from doing his or her own work of monitoring and coaching.
- c) Feeling you have to have the answer. It is the leader's work to make sure the best solution is implemented. Not being able to generate the complete solution personally is not a failure – the leader is being paid for his or her judgment.
- d) Being the technical expert. Like the trap above, this one arises because the leader behaves as though he or she has to know more than anyone else in the team. Superior technical knowledge and expertise is often mistaken for leadership, when in fact it masks poor social process and, at times, questionable capability
- e) Ignoring social and programming issues. Part of the culture that emphasises technical knowledge also downgrades the importance of or difficulty in the other areas of social process and programming. Programming includes checking progress against plan while at the same

time monitoring how the team members are relating to each other.

- f) Issue fixation. Allowing a single problem to gain the most attention, blowing it up out of proportion. It is essential to note how this affects other areas and what impact its solution has on the rest of the problems.
- g) Not willing to stand out in a crowd. This is one of the most common and damaging traps – when a leader is reluctant to appear to be a leader. This leads to an over-dependence on consensus, an attempt to achieve a ‘collective accountability’ when leadership behaviour is directed toward a merging with the group. The result is a rudderless slow approach, that lacks direction and clear programming. Be reassured that teams *do* like the leader to be *decisive*.

Traps for Team Members

- a) Keeping Quiet. This is where the team member does not ask questions or put forward ideas, behaving in a way that suggests that passive acceptance and blind obedience is what is required.
- b) Not Listening. Allowing other people to speak does not equal listening. There is a difference between waiting for ‘some idiot to finish’, and actively listening. Women often note that when they put forward an idea, it is ignored; it is then repeated by a man in the team and everyone reacts by saying it is a great idea. Women do not appreciate this, nor do minorities who often confront the same issue.
- c) Getting on with my job. This involves ignoring the situation and the needs of others, with blinkers on, and continuing to do your own work whatever the circumstances.
- d) Getting on with other people’s jobs. Team members may interfere with other people’s tasks because they think they know better. Such behaviour can also be an attempt to exercise power, disguised as cooperation, but is very different from co-operating.
- e) Wandering off. We have seen team members wander off either mentally or physically and often both, exploring possibilities without reporting back and in doing so missing vital information. Often it is with good intention, or due to boredom. However, it causes distraction.
- f) Fragmenting the team. This is a variation of wandering off and involves setting up *ad hoc* sub-groups to re-work the problems, changing the tasks and

redefining the purpose, again without feedback. This is an exercise of power – setting up internal factions that polarise the team and undermine the leader.

- g) "I knew I was right". Going along with a 'bad' plan, while actually undermining it in order to prove it was bad and having the dubious satisfaction of seeing it fall apart.
- h) Ignoring coaching. Being overly sensitive to questions from others (especially the leader) as to why you are doing something in a certain way. This may mean that you miss ways to improve
- i) Fear of taking over. Holding back because you worry you might take over the leadership inhibits your potential and the team's resources.

Conclusion

This approach to Project Leadership and Project Team Membership provides a practical guide to improve social process skills for both leaders and team members. It is far from complete, as it omits a number of the subtleties that are discussed in the *Systems Leadership* book. Good teamwork is an essential social process skill within an effective organisation or project.

Using these approaches will also help the leader demonstrate the core values of honesty, trust, fairness, respect for human dignity, courage and love that are essential to team cohesion. Clear statements of context and purpose along with the required output in quantity and quality terms, resources available and targeted time to completion allow everyone to get on with the project without confusion and mis-steps.

These will not make a perfect world for the Project Leader, but they have proven in many settings to make things much better. Tim, by the way, had training in these materials, and went on to take a Project Leadership role at level III. Last I heard he was quite successful in a managerial job at Level V.

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Catherine Burke, Ph.D., Associate Professor of Public Administration, Emerita, University of Southern California, Price School of Public Policy where she taught classes for over thirty years at the doctoral, master's and undergraduate levels. Her research focuses on organisations and systems design, management theory and leadership. She has been a consultant to Southern California Edison, the cities of Los Angeles and Pasadena, and the Congressional Office of Technology Assessment. She conducted two day-long training seminars for the command staff of LAPD in a program created by Chief Bernard Parks, discussing leadership, systems and organization structures that could be used in police departments. Her publications include Innovation and Public Policy and articles in various academic journals. She was a Director at Commonwealth Aluminum in Kentucky.



Karl Stewart

Queensland, Australia



Karl Stewart is a mining engineer spending most of his working life in leadership positions. He spent four years as an internal managerial consultant developing a thorough understanding of the theory underpinning the leadership of people in organisations and the systems that facilitate that activity. He created and implemented these ideas as Managing Director of Comalco Smelting. He was President of the Australian Mines and Metals Association for several years. After leaving Comalco Smelting he worked as a consultant to banks, aluminium, mining, finance and metallurgical industries. He also served eight years as Chairman of a medium sized construction company based in Queensland.