Leveraging Employee Resistance to Change to Improve Implementation

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Organisational change in Singapore is usually managed in a fairly robust manner. The need for change, once identified, is seen as important problem to be solved or opportunity for the organisation to exploit, and one on which some of the brightest intellects in the organisation focus their attention. After full investigation creative problem solving the proposed change tends to be a good intellectual solution to the issue confronting the organisation. All that is required now is to implement the proposed solution and all should be well. Not so fast! It is usually when the change is being implemented that resistance to the change rears its head. The perfect solution hits a few stumbling blocks which prevent its easy implementation. Of course employees in Singapore, which has a culture with strong Confucian values, tend to have great respect for the authority of senior management, the sponsors of the change. So resistance to change tends to be muted, and change is accepted with quiet compliance. “No choice ah?” tends to be the attitudes of a compliant work forceand the change is forced through. But does it have to be so? I would like to describe here an organisational change in which resistance to change and feedback from employees was used by the change manager to improve the technical features of the change and thereby reduce the resistance.

The change took place in a company on the electronics sector, within the Manufacturing Department of a very large wafer fabrication plant. The manufacture of semiconductors is very complex and involves over 200 processes, and the cycle can take over 60 days to complete the fabrication stage. Because of the sensitivity and precision of the product the process must be run continuously to meet quality requirements and achieve high yields. Therefore, each manufacturing section has to work continuously for 24 hours a day throughout the year.

Each manufacturing section is split into four shifts, with one Shift Engineer in overall charge of the shift, he reports to the Section Manager. Reporting to the Shift Engineer is a group of Equipment Technologists who keep the machines running, and a group of Manufacturing Assistants who load and unload the products from the machines. Each shift works for 12.5 hours a day, and has an “alternate four days, three days” work pattern. This means that on alternate weeks the shift works four days and rests three days, and the following week works three days and rests four days. Shifts are twinned so that one shift will work days and another works nights.

In order to cope with shortage of manpower in one shift, due to resignations, annual leave, sick leave or reservist training, the other shifts provide additional manpower to deal with the shortage by working overtime. This overtime is done during the non-working days of the shift pattern. The workers receive overtime payments for these extra shifts. To comply with the Labour Law requirements, non-working days are classified as “O” or “Off” days and “R” or “Rest” days. A worker always has a rest day before the next working day cycle begins. If an employee works overtime during an “Off” day he gets 1.5 times his daily wage as compensation, if he works a “Rest” day or public holiday he gets 2.0 times his daily wage.

The allocation of overtime was initially a poorly controlled process. Different sections used different adhoc approaches to make sure that they had the human resources available for each shift. Some Shift Engineers used spreadsheets in a systematic way of anticipating manpower needs, but often the format of the systems differed from each other. Others would wait until the shift began before calling in additional manpower to complete the manning. Those Shift Engineers using the spreadsheet method the process used a broadly similar approach. They would enter the number of shortages for each of their shift in advance so that other Shift Engineers would know how many to provide for each day. During the morning meeting the Shift Engineer would open the file and ask their Manufacturing Assistants to volunteer for particular overtime shifts. The file would be updated so that the other Shift Engineer would know who was coming in on which day.

There were a number of problems with this overtime allocation system:-

1. There was no standardised process across all Manufacturing Sections.
2. There was no system to identify “no show” overtime staff, who were allocated the work but did not turn up for work.
3. There was no control of overtime allocation by penalising those who frequently failed to turn up for overtime work that had been assigned to them.
4. The 2.0x overtime for rest days was not fairly distributed. Some staff only volunteered for overtime on rest days or public holidays.
5. On occasions staff who volunteered for overtime and did not turn up to do it, but were still paid for it. This was because the supervisor who approved the overtime was not on duty that day. Poor communications meant that the supervisor was unaware that the missing staff should have turned up
6. The current system did not include information on staff who had applied for leave. These absentees may be not considered during the overtime allocation session, and their absence would only be known when the shift started, and so a Manufacturing Assistant would have to be called in the factory after the shift had started, leading to delay and inefficiency.

These problems were highlighted in the early months of 2007 when the prices of DRAM began to take a downward turn, and market conditions began to look less optimistic in the medium term. As part of a strategy to monitor and control costs the management ordered a survey to model manpower requirements and to look at the relationship between manpower requirements and production output. One issue that the study examined was the comparable cost of maintaining manpower at current levels and getting the staff to do overtime, compared to hiring more headcount to reduce the costs associated with overtime. However, because there was no data or records of overtime deployment in the past it was not possible to conduct this study. This triggered management to set up a team to work out a solution to the overtime problem

The solution to these problems was consolidated in new Centralised Overtime Shift Planning System. A software system which had been designed to overcome the manifold problems with the current overtime allocation methods. The new system had a number of features that meant that there was better recording and control of the overtime allocation process. The system operated as follows: -

For the Manufacturing Assistants:-

1. At the start of their shift they have to enter into the system their availability for overtime during their non-working days
2. Once the overtime had been assigned by the Shift Engineers the Assistants would have to login to the system to check which days they were required to come in for overtime, and confirm that they had accepted the allocated days.
3. If they were not able to come in on the days that had been assigned, for some unforeseen reason, they would have to inform their Shift Engineer.

For the Shift Engineers:-

1. The Shift Engineers enter their required number of additional staff into the system to cover the absences of current staff
2. The Shift Engineers can only assign the overtime allocation after the Manufacturing Assistants have entered their availability
3. The Shift Engineer decides who will work on which days, and bases his decision on so that the 2.0x rest day or public holiday overtime pay is fairly distributed.
4. At the end of the shift the Shift Engineer is supposed to remind the Manufacturing Assistants to log into the system and note when they are due to come back for overtime
5. At the end of the shift, the Shift Engineer is required to mark the attendance of those who turned up for shift coverage, and in the case of no-shows, enter the reasons why they had failed to turn up.

The new Centralised Overtime Shift System provides valuable information about the manpower deployment for the wafer fab manufacture. From this information it is possible to identify: -

1. Which section is constantly understaffed
2. Those who persistently fail to turn up for overtime and their reasons
3. The percentage of overtime worked by each employee, so that during a downturn management can control costs by fixing the amount of overtime allowed for each staff. Shift Engineers can also use the system to make sure that overtime is allocated fairly and does not exceed the overtime limit

The system itself is programmed to: -

1. Ensure a fair allocation of 1.5x and 2.0x overtime to all Manufacturing Assistants
2. To include information on the staff who had applied for in advance for leave so the predicted staff shortages were accurate
3. Penalises those who constantly fail to turn up for overtime with no good reason by restricting the amount of overtime that can be assigned to them
4. Prevents claiming of overtime by staff who do not turn up for the overtime but still proceed to claim for it, since the Shift Engineers have the updated system for marking the attendance of those who turned up.

The design team were pleased with their technical solution to the problems outlined earlier. The User acceptance and testing of the system was conducted and passed and a pilot test of the new system was undertaken before it was rolled out to the whole of the Manufacturing Division. After testing the system for one week a number of complaints about the system were received and acceptance of the system by the Shifts was not encouraging.

The complaints included the following: -

1. There were not enough computers in the Fab work area for the Manufacturing Assistants to login and enter their overtime availability. In the past only one computer was needed as everyone would gather together during the morning meetings when the Shift Engineer would open the file and do the updating
2. The system was too complicated for many of the manufacturing assistants to use
3. More time was required to use the system as the Shift Engineer had to logon repeatedly to the system to check if all subordinates had entered their overtime availability before he can start planning
4. If planning changes have to be made, only the shift Engineer can open the file and make the changes, in the past anyone could open the file and make the changes themselves.
5. The Manufacturing Assistants could not access the file from remote locations, so that if they needed to find out which shifts they were working, or change their availability they would have to wait until the next meeting with the Shift Engineer.

These complaints were made by both the Manufacturing Assistants and the Shift Engineers, so both the line workers and the management were finding the new system difficult to implement. However senior managers were concerned to bring in the changes and their response was that everyone would have to accept the changes and just “suck it up.” Their objective was to contain the costs of operating the manufacturing system, and to eliminate some of the workplace abuses that had been identified.

The resistance to the new system came as a surprise and disappointment to the design team. Their technically very elegant solution had hit some bumps in the road to implementation. The problems in implementing the new system were discussed with the client who was responsible to senior management for the introduction of the new system.

So what might have been the causes of the resistance, and what can we do about them, and is this manufacturing group ready for change?

One major source of resistance to change is a perception that the employee is likely to **lose out** financially or materially if the change is introduced. In this instance some of the Assistants would lose out because the new system would prevent them from working only double time shifts on rest days and public holidays. Further those who accept overtime, but do not turn up to work it and still claim payment will lose out. But this is a very small number of employees and there was recognition that these abuses were not and could not be tolerated, and overall pay would not be affected by the changes.

Another source of resistance comes when the **social relationships** which have developed between workers are broken up or disturbed by the changes. We get to know our colleagues and a *modus vivendi* develops which allows us to rub along together. Of course at times we have to work with people we do not like and we might prefer to work with friendlier colleagues. In the changed system the person who allocates you to another group for overtime is the Shift Engineer, and while he/she might have some insight about who gets along well together he/she might not realise that there were some personality conflicts between the person allocated to do the overtime, and the work crew that he/she was allocated to.

We also like to feel that we have a **sense of control or autonomy** over the way in which we do the work. This is a need to feel that we can influence essential decisions about how, where and when we will be expected to perform our work activities. In the changed system the Assistants could volunteer to work overtime on particular days, but the decision on which days he.\/she would be called in, and who he/she would be working with were decisions made by the Shift Supervisor.

If we add to these issues the work done by Armenakis et al (2007) on whether an organisation is **ready to change,** we can see a number of shortcomings in the design of the new system. They suggest that an organisation needs to be receptive to change before the change can be easily implemented. This receptivity to change is determined by four major contextual factors, which need to be assessed and perhaps improved if the change is going to be fully implemented.

The four contextual factors are: -

**A Sense of Efficacy** – this is the belief of the staff that they are capable of making the change, capable of learning what is required of them and delivering the required behaviours on the job and that they have the resources to make the change. It comes down simply to self-confidence and confidence in the new system. Well the workers did not have to master new skills for the job, but what is startlingly apparent was that there were not sufficient computers for them log on at work and find the dates of their intended overtime, nor could they access the timetable from home. By itself these inadequate resources and system incompatibilities would have caused major problems with the new system, because people would miss their overtime because they had not been informed. By not addressing this issue the organization was signaling that it was not ready for the proposed change.

**Appropriateness for the organisation** – Those involved need to feel that the change meets an organisational need, and make sense in terms of what they believe the organisation’s purpose is. They need to see an alignment between the aims of the change and the organisation’s strategy. This issue was fairly well dealt with. All staff could see that cost was going to be a major factor in determining the profitability and sustainability of the organisation and that the change would make the monitoring of costs more effective.

**Leadership** – The leadership in the organisation needs to be committed to the change and be prepared to give adequate resources to making it happen. This was not very well done. Senior management had been asked to provide more computer terminals so that staff could access the system before their shift started, but refused when they realised that the computers would only be used for a few minutes each day. Their tough attitude that everyone would have to adapt to the new system without compromise made them appear insensitive and unsupportive of their staff.

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**Personal Value** – Does the change meet some of the needs of the staff? Well the needs of the staff were not the key drivers of this change. The change was to improve operational efficiency and monitor costs of the manufacturing process. The inconvenience of the using the new system would mean that this would have a negative value for the staff, with very little upside value for them in terms of improved pay or more interesting work.

So for some of the reasons outlined above the organisation did not seem to be ready for the change, and together with some of the factors creating personal resistance to the change perhaps it was not surprising that both Shift Engineers and Manufacturing Assistants were resisting the introduction of the change.

A fairly depressed client sat down with me to discuss what if anything could be done to salvage the situation. During the discussion it became apparent that one stumbling block to easy implementation of the new system was the lack of sufficient computer workstations for the Manufacturing Assistants to have easy access to the system. When I probed how the allocation of overtime was done before the introduction of the new computer system, we both had a sudden blinding insight about how the problem might be fixed.

In the past the whole shift would stand around the computer and decisions would be made there and then about when the staff would work overtime, and also importantly who they would work with. This meant that they could influence the decisions about their overtime work. They were involved in the decision making with the shift Engineer about which days they would come in, and they could also elect to work with their friends during the overtime activities. The new system took this choice away from the Manufacturing Assistants, and instead these decisions were made by the Shift Engineer.

The solution seemed simple. The new system had incorporated into the software all of the requirements such as fairness and accountability that the design team had written into computer system to overcome some of the abuses identified with the old method of allocating overtime. If the new system was retained but the social and decision making features of the old methods were also incorporated, then the resistance might be reduced. This meant that at the beginning of the Shift the Shift Engineer would open the overtime software while the Manufacturing Assistants stood around him. The Shift Engineer would then identify the days on which overtime would have to be worked and ask for volunteers for those days. The volunteers could ask for particular shifts and the Engineer would enter these into the system. If two or more volunteers were needed they could ask to work on the same shift. Again the Engineer would enter these choices into the system. However, the system would not allow the Engineer to enter too many 2.0x days for any particular individual because it was programmed to reject such arrangements. At the end of the meeting each Manufacturing Assistant would know which days he was working overtime and who he was working with. This saved time and gave immediate feedback to the Manufacturing Assistants about their overtime days.

This revised method of inputting the data into the system was vetted by the various stakeholders, including senior management and another pilot program was approved. In this test the new system was accepted with no resistance and a decision was made to implement it in the whole of the factory.

What can we learn from this? There are many reasons why employees resist change. The most common reason would be if the employee was to lose out financially as a result of the change. As business conditions get tougher and firms need to cut costs wages and benefits can be cut in order to improve the firm’s bottom line. In the case presented here it is likely that that some of the employees will lose out as a result of the change. If an employee has only ever volunteered for rest day and public holiday overtime he will find that his take home pay is reduced. But that was not the reason that the staff resisted the change in this case. The reason they resisted the change was that their autonomy and choice about when, and with whom they would work overtime was being taken away from them. We all like to feel that we are in control of some key elements of our working lives. When this autonomy and freedom of choice is taken away we feel threatened and will resist the change. In this case, with the new system it was the Shift Engineer who decided when his staff would work overtime and with whom they would work. When this choice was given back to the employees in the revised scheme then the resistance disappeared. What was implemented was a much better system, one in which the fairness and probity of the new technological system was maintained, but which also preserved key elements of the social and psychological system which the employees valued. It was a win/win outcome.

The other key learning to take away is that managers responsible for managing change tend to fall in love with their solutions to the problems they are working on. This makes them resistant to modifying the change once they have developed the solution. What this case illustrates is that by listening to the concerns of key stakeholders in the change, those people who are intimately involved in the change, they can find ways of improving the change to meet their needs. This requires some creativity and not a little humility.

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