Contractor Safety Management- Who Manages Who: A Contractor's Perspective

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Abstract

Safety Management is a core issue for all businesses operating in the mining Industry. It covers all aspects of occupational health and safety and is a very personal issue at all levels in a business. When you succeed, the business can grow but fail in safety management, and ultimately the business will be compromised. The issue of Contractor Safety Management, as one part of Safety Management, has been a focus of industry attention in recent times, with a perception that it has it's own peculiar issues to deal with, that the contractor has to reach industry standards, that they need to be accommodated in owner / operator safety systems, and in fact present a particular risk to the industry that requires special attention. It is proposed that Safety Management is a core business issue for the contracting fraternity and is a primary driver in the contracting business, no different to that of the owner / operator, and hence does not present a particular risk to the industry.

The management of safety in the mining industry, whether by a contractor or owner / operator, must have the same focus. Where small contractors are involved, their role on the mine site may be no different to that of a mining crew. Here the management of safety is a responsibility of the crew, who seek their direction and safety leadership from the behaviours of site and senior management of the owner /operator. As the role of the contractor increases at a particular site, so the influence of the site and senior management of the contractor becomes more influential. Both the contractor and owner management must be aware of the change in the safety management process on site, so as to ensure that their futures are not compromised, by a lack of understanding in their respective responsibilities to safety management.

In this paper, case studies will be used to explore the need for, and process by which, management and employees can be made aware of their responsibilities, as the role of the contractor changes in the industry.

Background

Managing safety, in order to have a future in the mining industry is a fact of life for all those operating in the industry today. Contractors, mine owners, suppliers, unions and the Inspectorate all have a common interest in managing safety to provide the industry with a safe future. An individual is killed on the road; it passes by without a mention, the only reminder a white cross and flowers by the side of the road. A death or serious injury in the mining industry and the spot light is upon us, and well justified. But for the industry to have a future we are responsible for changing the perception of our industry and spreading the good news stories. This is the responsibility of all players in the industry, and not a matter of who manages whom. However, the issue of contractor safety is one, which needs definition to ensure all the players are clear of their responsibilities of safety in the workplace.

The role of the contractor in the industry has changed in recent years, particularly in the coal sector. Although the contracting fraternity are still used for those specialist, short term projects there is an increasing use of contractors as the operators in the mine, with many operations now being not only operated by the contractor, but also bearing the Statutory responsibility, with the owner providing less and less resources in their projects. The transition in this change in the scope of work undertaken by Roche Mining as a contractor has required a greater level of sophistication in our safety management systems. No longer is the contractor limited to providing the owner with the training authorisations of their operators, and then waiting for the owner to induct the contractor in their safety systems. Now there is a need for the contractor to provide their own safety management systems, in fact without them they will not win the work. In a number of Roche Mining projects we supply the statutory personnel, and deliver our services to the client, with safety performance as a clear key performance indicator, on which we are paid and judged in winning future work.

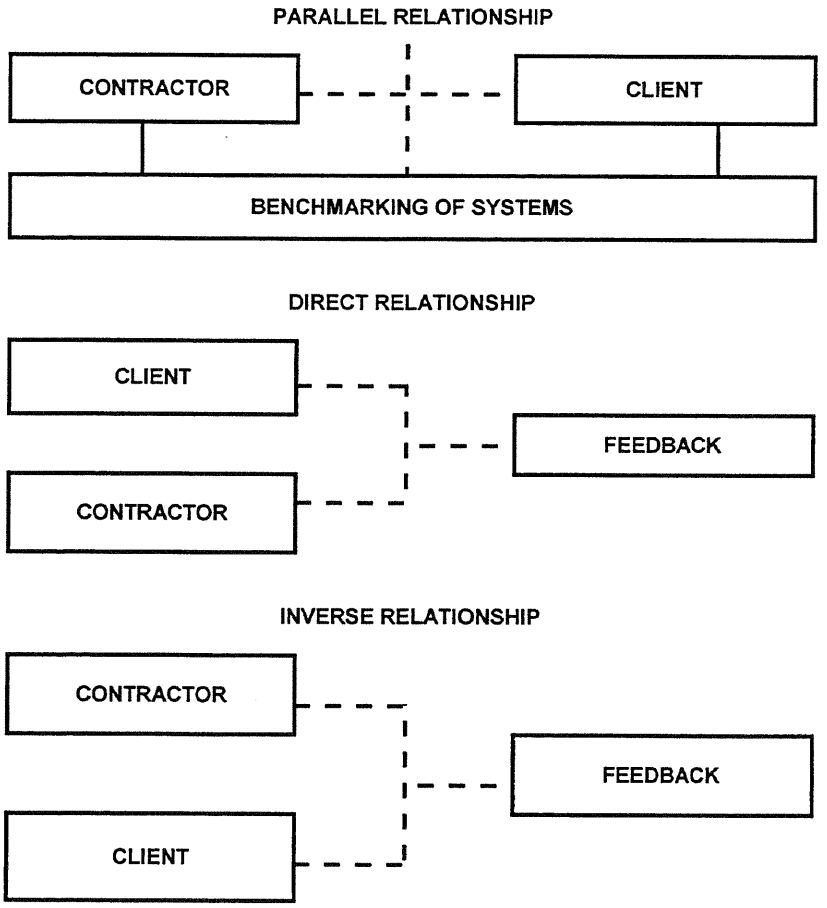
Safety Management Relationships

The many safety systems, which are in use throughout the industry, all have their strengths and weaknesses. It is generally not the system that determines the safety performance of a site, but the genuine commitment of senior management, middle management, frontline management and ultimately the operators in the workplace that determines how successful an operation is in managing safety. This commitment can be misdirected where there are not clearly defined relationships agreed between the interested parties on any project, prior to its' commencement.

The project will generally determine the relationship between the contractor and mine owner. As part of the Roche contract risk assessment process, undertaken prior to committing to a contract, it is important that we identify at an early stage which of the safety management relationships will be developed for the project. Not only is this a commercial driver, but also the Contractors corporate safety managements system must be flexible enough to be able to be modified to make them project specific, and reflect the relationship model that will be used in the project. These relationships, shown in figure 1, can be defined as one of the following safety management relationships:

- Parallel
- Inverse or,
- Direct

FIGURE 1 - SAFETY MANAGEMENT RELATIONSHIPS



Parallel Safety Management Relationships

A parallel safety management relationship is one in which the client operates their own safety management systems within a part of the operating complex, while the contractor runs their own system within their part of the operation.

This may extend to the full responsibility for all statutory activities together with the overall contract safety management system of the operation. Generally the client's complex will include multiple operations.

The advantages of the parallel relationship are that both parties can benchmark their respective systems and safety performance against the other. This benchmarking may result in the client adopting components of the contractors safety system for his or her own operation, or vice versa.

The parallel relationship will have great difficulty operating in single mining activity operation, and depends on clearly defined boundaries of responsibility, generally taken as operational defined boundaries. Within these boundaries the contractor becomes responsible for all statutory and safety management, the client working under the contractor's system when they operate within the defined boundary. It is important in implementing this relationship model that the contractor has the full Statutory responsibility, and hence ownership of the safety management systems, both in their development and operation. However, it is will work where the owner carries the statutory responsibility.

The parallel relationship is the easiest relationship for the contractor and owner to manage. Their employees operate within familiar safety management systems and have ownership of the system having been involved in its' development at other sites. The boundaries are clearly defined, and any, or all activities within the boundary become the responsibility of the contractor. The relationship does require greater resources to be made available by the contractor, however some contractors will argue that operating within this relationship has the advantage of not having corporate systems, that are not tailored to the contractors business, imposed on the contractor.

The parallel relationship is used in the majority of the Roche projects, these being in both coal and metalliferous, both open cut and underground.

Direct Safety Management Relationships

The direct relationship is the traditional owner / contractor relationship in which the contractor operates under the client's safety management system. The expectations on the contractors employees is no different than that of the client's employees, albeit that the client's employees may have a greater expectation! In this model the client generally has successful and mature systems. The contractor will sometimes operate both the client's and its own management systems under this relationship. This is done for one of two reasons. Firstly, that the contractors and client's systems can be dovetailed and a common system utilised, hence improving the acceptance of the system by the contractors site management and employees. Or secondly, that the contractor has mature systems that are used for internally benchmarking and the contractors employees are familiar with the system.

Where small specialist contractors operate at a site for short duration contracts this type of relationship is commonly used. The smaller contractor does not necessary have the resources to support a structured safety management system and therefore will adopt the client's system. The contractor employees become an extension of the client's work crews, forming additional work crews under the same management system.

The contract risk assessment undertaken prior to the start of the contract is important in the operation of the direct relationship. The contractor must be aware of the client's systems to ensure that all the activities the contractor will be undertaking are adequately covered by the client's system. Although the client may have the statutory responsibility for the safe operation of the contractor, the contractor maintains a clear duty of care for its employees and business.

The direct relationship provides the highest risk relationship in any contract. The contractor's employees, having little ownership of the system, and the client reluctant to modify their established systems, may fall into the behaviour of compliance. Where the boundaries of responsibility are determined by activity rather than area, the relationship may be strained due to a misunderstanding of who was going to do what. This type of relationship may therefore require the largest amount of auditing and review by both parties to ensure all bases are being covered.

In some cases the client's safety system will be used as a minimum standard, and supplemented with the contractor's additional standards. The direct relationship is commonly used by Roche when using sub contractors in their projects, in a similar manner to the relationship used by the owner / operator.

Inverse Safety Management Relationships

The contractor will generally favour the Inverse relationship when operating on a mine site where the client's systems are immature or non-existent. The client will in this relationship be looking to the contractor to establish the safety management systems on site, and the employees of the client will work under the contractors systems. This type of relationships is generally restricted to the smaller operator who has limited resources. The definition of responsibility is clearly defined by the client there being little confusion as to who is responsible for the contractor safety.

In this relationship the contract risk assessment is an important tool for the contractor, there being no benchmark in safety systems provided by the client. However, in this case the contractor will modify their generic safety system to make it site specific and hence the system must have the flexibility to be customised to the specific operation.

Relationship population

Roche Mining operates on multiple sites by the very nature of our business. This exposes us to many different safety management systems and safety performances in the industry. This can be both an advantage, and risk to the contractor. The obvious advantage is that they are able to benchmark their safety systems with that of the various clients' they are working for. The downside is that the contractor may have to modify their systems or work under the client's system. This can result in the contractor's workforce adjusting to new systems at each site they move to. The constant change can lead to inconsistency in the approach to managing safety, and the loss of ownership by the workforce. It is for this reason that Roche go to the extent of running duplicate systems, if the need be, so as the workforce maintains ownership and familiarity with their own safety management system and philosophy irrespective of the site they are operating at any one time.

Currently Roche operate at twenty-five sites around Australia with sixteen sites in the Eastern sites. In these sites there a number of commodities mined, in different states under different statutory regimes, and using differing methodologies, both open pit and underground. As shown in table 1, this results in the contractor managing all three types of relationships. This scenario being common to most multi-site contracting companies.

	Underground	**Open Pit**
Parallel	2	7
Direct	0	1
Inverse	1	5
Total	3	13

Contractor management of safety, at multiple mining sites where differing relationships exist in the management of the safety management systems, results in the need for management processes that are common to the owner and the contractor. These include the following:

- Risk assessment
- Flexible management systems
- Operator training
- Management training
- Audit processes
- Client, Contractor and employees understanding the relationship model they are operating under

Relationship Risk Management

Roche Mining recognise that as a contractor it must develop sound management processes to address the relationship models that exist at the various sites it may be working. These processes start at the Prequalification stage and form an integral part of subsequent stages in the development of new business, and ultimately new operational responsibility. These include:

- Prequalification
- Contract Risk Assessment
- Tendering
- Project and Safety Management system design
- Audit programs
- Employee and management training

Prequalification

The client primarily drives this. It is generally only the large clients who have a well structured prequalification process, which requires the contract miner to describe their capabilities and experience in particular, their safety and environmental performance. These prequalification documents can be very extensive covering – management policies, organisation, hazard and risk assessment processes, training, reporting and communications, work practice controls, fitness for work programs, performance monitoring and injury management.

Prospective contractors are rated according to their responses, and high ratings are required to be invited to bid. This rating can be just as important as price to many clients, or in fact preclude further consideration in the tender. This is of course not the case in all tenders, many being price driven.

Contract Risk Assessment

This is how the contractor determines if the project will be attractive and viable under various parameters. It forms an integral part of the risk mitigation strategy that the contractor undertakes prior o entering into contract negotiations. The safety management exposure is examined through the principal hazards in the project, the client's performance in the area of safety management, and the potential improvements that the contractor can bring to the project.

By examining the invitation to tender documents and contract requirements, the commercial, operational and safety/environmental risks can be assessed. It is at this stage that it is critical not only to know the projected size and scope of the job, but also how the statutory responsibilities and work boundaries will be allocated between the client and the contractor. In many contracts key performance measures are also defined and linked to remuneration on the job, or there may be some sharing of risks and profits.

Tendering

In the tender bid, the contract miner must ensure they have a very clear understanding of not only the regulatory requirements and responsibilities, they are expected to assume but also the technical and contract requirements. This is particularly critical in the areas of safety and environment; who will be the registered manager, who will gain the necessary environmental approvals/licences, who provides emergency services, etc? This can vary widely according to the different client/contractor relationships identified earlier.

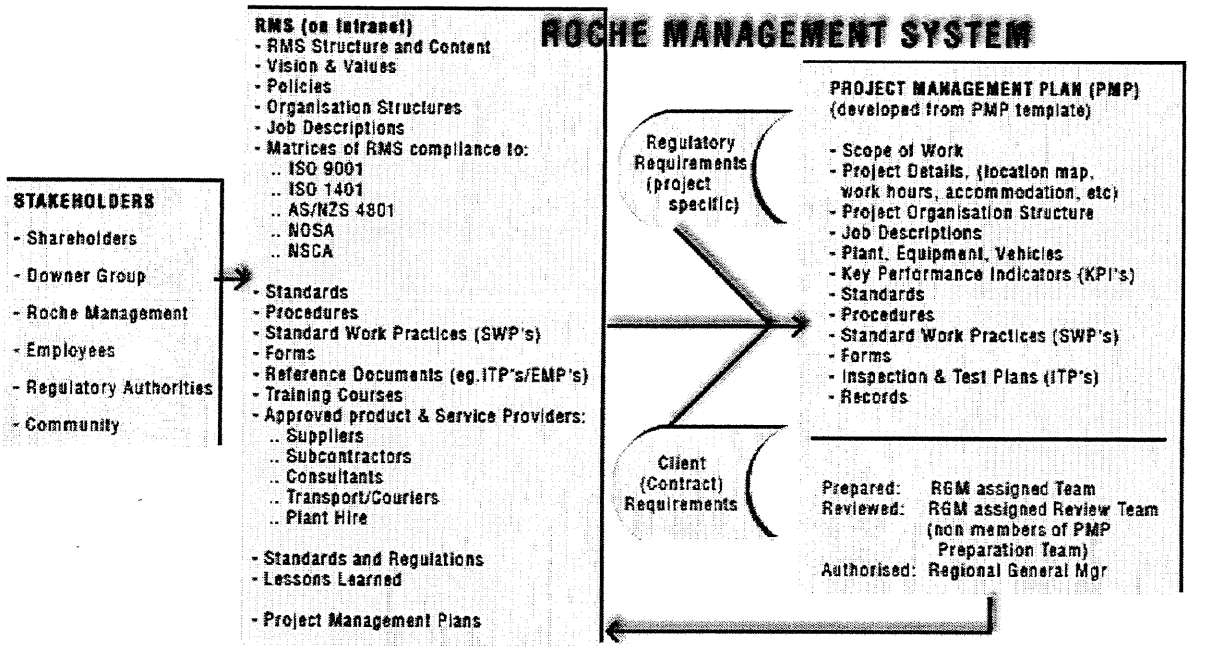
There can be substantial costs involved in setting up a project if the contractor has to comply with unique training, safety, and / or environmental management requirements of the client. These may well duplicate already established systems that Roche have developed.

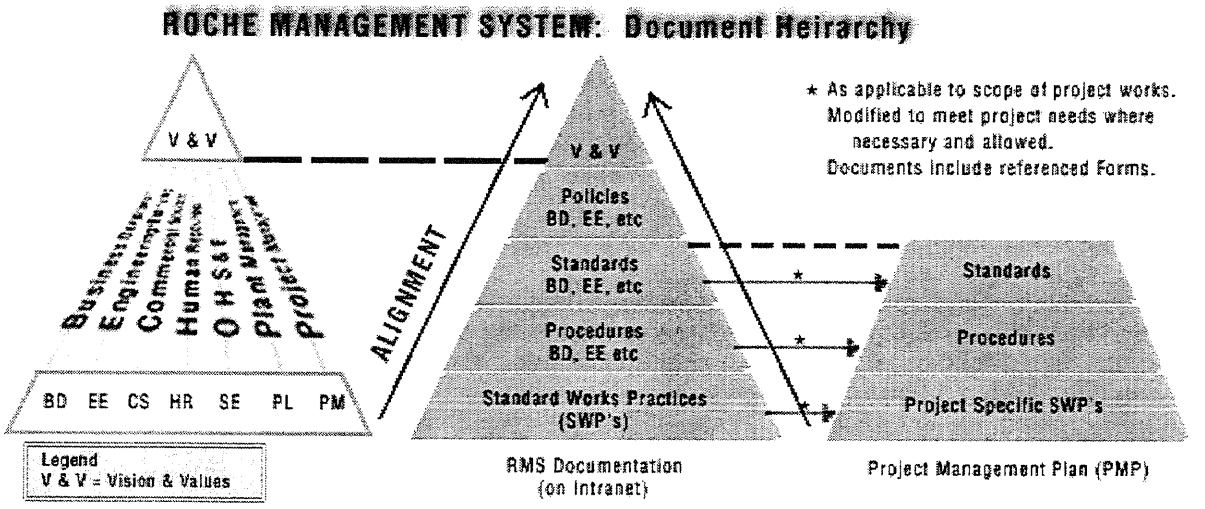
In addition equipment may need to be especially outfitted to meet special standards eg fire protection, access, lighting, etc. Fortunately these are becoming industry standards so the large contract miners are well placed to meet these.

Project Management Plans

Assuming the tender is successful, there is still much to be done to map out very clearly in a practical management plan the scope of the work, the resources that will be provided (people, equipment, facilities) and the safety, health and environmental management on the job.

At Roche Mining we have established a Roche Management System, which has the ability to develop unique Project Management Plans for each job, linking together our standards, procedures and systems, the relevant statutory requirements (by state, mining type – open cut, coal, metalliferous, etc) and the client's contractual requirements. It also captures any performance measures defined (KPI's) and how we will monitor this performance.





A key part of this plan is the safety and environmental plan.

Safety and Environmental Plan

As the primary focus of mining acts and regulations is to ensure safety and health in mines, it is critical that all statutory responsibilities and requirements, such as ventilation, are clearly defined in these plans and there are no gaps in accountabilities.

Roche Mining also have the ability to tailor their ROCHE SAFE OHS&E system, based on recognised standards AS4801 and ISO14001 to align with each states mining requirements. The plan lists how all aspects of safety and environment will be addressed and who will be responsible for it. Where the client is supplying certain services such as emergency response, medical centre, etc., these are listed on the plan.

Where specific major risk plans or manager's scheme or training schemes are required these also become part of the Project Management Plan.

Audit Programs

A key part of the Roche Safety Management system is the disciplined audit program that has all operations being audited by external personnel to the site. The audit process is the key to any successful safety system. In the Roche system it ranges from auditing of operator knowledge at pre shift meetings to full day system audits.

Case Studies

In considering the various relationships that may exist at a project site it is useful to consider some case studies to show how the process of safety management is achieved through the recognition of how the relationship is structured between the client and the contractor.

Parallel Relationship - Lewis Mine

The Lewis Mine is a Greenfield operation operated by Roche Mining for and on behalf of Gympie Eldorado Gold. The contract is a five year contract requiring the establishment of mature safety management systems. The mine is located to the south of the town of Gympie and is currently 2000m from surface portal, via a 5.5m x 5m Decline. It is in the process of accessing the Inglewood orebody and preparing for production to commence.

Roche Mining has developed the mine from the initial boxcut excavation, used to access the unweathered material from where the portal was established and decline commenced.

In setting up the mine, the client required Roche to establish the mine and fulfil the duties of the 'Operator' under the Act, with Roche providing the Senior Site Executive and all statutory positions. This necessitated Roche supplying a safety management system that not only satisfied the parallel safety management relationship, but also satisfied the statutory requirements for the mine. In a commercial sense, the safety and environmental performance of the mine is further monitored with performance bonuses being dependant on certain KPI's in the contract.

The form of the contract at Lewis Mine made it quite clear 'Who was managing who'. The client required Roche to have full responsibility for safety management, the relationship being at arms length, monitored by key performance indicators. The client operated it's other underground mine, the Monkland mine with it's own safety management systems, in a true parallel relationship.

In managing the Lewis Mine. Roche have introduced the Roche management system 'Roche Safe', together with the Roche Underground Mine Control System. The combination of these systems, the great commitment of the Roche workforce at the Lewis Mine has enabled the operation to completed 400 days Lost Time Injury Free with no major equipment damage, ground movement or significant incident. In the setting up of the site, as a Greenfield site, the initial standards of installation and recruitment were set at the highest level.

This then set the bar for future operations at the mine; with a clear direction that Roche had full responsibility for all aspects of safety and environmental management at the mine.

The use of the parallel relationship has allowed the client to benchmark between the Monkland operation and the Lewis Mine. The mines have been able to operate independently with the Monkland operation running with it's own safety management systems.

Inverse Relationship - Highway Reward

Roche have been involved in the development of the Reward Deeps Mine at Charters Towers for Thalanga Copper. The project has involved the establishment of a new underground mine, operating from within the existing open pit operations, alongside an open pit contractor using shared facilities including haul roads, dumps and pumping ancillary facilities. The project has included the establishment of three portals and the development of the initial 800m of decline.

In establishing the site the Roche Management systems were used, the documented procedures and training scheme formed the safety management system that the client, who has maintained the statutory responsibility, referred in the approval for operations at the mine. Although the client has maintained the statutory responsibility, the Roche safety management system has been used to manage the principal hazards in the operation. In a similar manner to the Lewis Mine, the standards of excavation, maintenance, operation and particularity recruitment were undertaken to the highest standards. The operation has performed since the start of operations without a Lost Time Injury, now over 100 days, and safety audits, workplace audits by the operators, and mandatory preshift safety meetings have all been implemented to maintain this performance.

Workforce and management training in hazard identification and risk assessment will supplement excellent work undertaken by the sites in establishing the high standards at the commencement of the operation. The use of new programs and external providers forms an important part in the Roche management safety systems, irrespective of the safety relationship that is operating at the site.

Direct Relationship

The use of the direct relationship is commonly used by Roche and other contractors, in a manner not dissimilar from the owner / operator. This is in the management of subcontractors at a site. These personnel are treated no differently to the permanent employees of Roche, and have responsibility under the Roche Safety Management System.

Conclusion

The question posed in this paper is, 'Who manages who in Contractor Safety?' It is clear that the project will determine the answer to this question, that is, it is a site specific issue. However, the importance of safety management in the contracting business is no different than that in the owner / operator business. It can be argued that to the contractor business, the success of safety management has a greater impact on our business than that of the owner / operated business. This has lead to Roche Mining and other contracting businesses developing safety systems that are becoming benchmarks in the industry today. The safety performance of some of the contracting business is again forming benchmark standards. As an example the Roche Mining Underground and Highwall business in the Eastern states has now operated for over two years without a Lost Time Injury, with the overall Roche business having a Lost Time Injury Frequency rate of 2.4, with over 1200 employees operating in 25 sites.

To maintain safety performance in the contracting business, the importance of recognising, and then communicating the safety management relationship that will operate on the site is critical. No operation can afford to have grey and hazy lines when it comes to safety management. It is important to realise that there is no one safety management relationship that will cover all sites; it is a site specific issue. The skill of the parties in recognising the relationship and growing it, will determine the safety performance on the site.

Contractor Safety Management is no different from Safety Management on an established and owner / operated mine site.

By developing the relationship at the commencement of the project, the management systems can be modified to reflect the relationship. It is important that this is defined and communicated at the start of the contract rather than evolving through the contract. It may be too late by this stage. There needs to be a clear understanding that it is not the systems that will determine the effectiveness of contractor safety, but the knowledge of how the system relationship works.

New legislation has been good for the industry, but the maturity of the relationships in the industry will determine the success of the legislation in changing safety performance, irrespective of whether it applies to the contractor or the owner / operator. Safety systems must be robust enough to be flexible yet maintain integrity as the relationship changes form site to site, or contract to contract.

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