

Apollo case study

Business



The movie illustrates how the leaders can develop a vision and values, and how the teams can collaborate under high stress situation. In the beginning of the movie the vision of the Apollo 13 project was to land the astronaut's on the surface of moon. But the unexpected explosion in the service module created " Do or die" situation for the team.

The vision of the project is suddenly changed to eating the astronaut's back on earth safely.

NASA had a common goal that was strongly set in the minds of each engineers and they are well aware of the cost of a failure. Even under this tremendous pressure, the team was able to communicate effectively and use different types of decision making techniques in order to solve the problem effectively. The movie shows an enormous team effort to triumph a doubtful result, and everyone has their own role to play.

The mission control team headed by Flight Director Gene Crank had developed a set of values, like discipline, morale, snugness, competence, commitment and team work to approach this odd scenario. And it was these values that build the chemistry that keeps them together in all the difficulties to reach the success. Flight Director Gene Crank organizes the team with his instruction to 'Work the problem', enabling everyone to play their role in resolving the situation.

For every seemingly impossible situation, he given a new energy and ' Sino for the team by his response " we need to find a way to make it work" reams and Team Building ere movie shows the pain of team work and what happened during emergency. There are primarily 3 teams in the movie. First

one is the mission control center team Ninth Flight Director Gene Crank. The second one is the Apollo 13 mission team with Commander Jim Love and the third one is the team of family members of astronaut's.

Gene Crank and Jim Love are the key players who will address how a leader is able to influence and lead the team in a situation in which unexpected events occur on a regular basis.

When facing issues, conflicts, and the achievement of goals, having a fully functional and focused team is vital. Even under tremendous pressure and many conflicts, the Apollo 13 team was able to make decisions effectively in solving the issue. Prior to any group work it is vital that there is adequate colonization of team members through forming, storming and morning. Hen Captain Jim Love was told that he had to make a decision to replace Ken Imitating with John Swagger . His decision to replace the crew member was a tough one because they already spend enough time to perform well together.

The team structure and the ultimate leadership was the main reason for ground team's remarkable performance. Each functional team in the ground was represented by a team leader and the team leaders reported to the flight director.

The team leaders to come up with the optimal solution, followed by approval from the flight director and Implementation by the astronauts F g Director Gene Crank was always there to guide the discussion if they started to deviate from the objective. He was always associated with the team to empower them to solve the problem and guide the process. He is leading the <https://assignbuster.com/apollo-case-study/>

team to the right direction and giving an inspiration for his team while saying “ Let’s work the problem people. Let’s not make things worse by guessing”.

It was up to the team to determine exactly how to do that, he was just leading them in the right direction.

Good teams will maintain a creative atmosphere so that ideas can be cultivated and grow. In the movie, Gene Cernan was strong in his confidence to the team even though everyone had internal doubts about the success of the project. This allowed everyone to have confidence in what they were doing. Without this confidence, it was not possible for the team to solve such a severe problem.

Technical Proficiency, Creativity and Innovation are plot of the movie is all about resolving an unexpected problem with limited resources and no prior experience.

It is a technically sound movie, which is giving situational experience. Leadership skills such as effective communication and teamwork are creatively incorporated in the movie. The director, Ron Howard, attempted to make this movie as realistic as possible using direct interaction from the space station and recreating the actual NASA mission control center in Houston. In the beginning of the movie, it was just a normal space craft launch until the explosion happened in the service module. At that instant, the ground team shifted the goal from mission completion to getting the astronaut’s back alive.

That uncertainty created a lot of space for innovation and creativity. It's a new challenge for both the teams. Once the return itself was a difficult task, each segment of the original plan had to be redefined to serve an alternative plan. That gives an opportunity for the engineers to think creatively and out of the box. Everything in the space shuttle became a potential problem-solving material, when the engineers were asked to design a carbon dioxide filter that the Apollo 13 astronauts could make with available resources. They even consider socks, plastic bags etc.

Or making the CO filter. Freezing temperatures, illness and thirstiness were accepted to store the energy that would be needed for the re-entry. The sudden and the severe limitations generated a highest order of innovation. When Gene Crank is giving the direction for the team " Forget the flight plan, from this moment on we are improvising a new mission. How do we get our men home? " the team has started working for a new mission without any fixed ad hoc procedures and previous experience.

They are trying all the possible solutions to bring them back.

The solution was derived from a series of assumptions, calculations, simulations, decisions, trials, planning, and execution, all driven by on the spot creativity and innovative thinking. Decision making and problem solving. In the movie Apollo 13, the teams were challenged with accomplishing an unplanned goal under extreme stress, limited resources, and many other problems. The only favorable factor for the team is a visionary leadership to guide them. If the mission is not attained successfully, that will cost 3 astronaut's their lives.

Even under this tremendous pressure, the team was able to practice different types of decision making techniques in order to be effective in solving the problems. The message 'Houston, we have a problem', indicated that an explosion had occurred in the affect, resulting a drop in the supply to oxygen to the tulle cells and crippling the electrical system. The mission team worked closely with the ground team over a 3 day period to design the emergency re-entry approach. The decision making was always under time pressure.

Some decisions must be made within seconds, for an example shutting down the fuel cells. Both the ground team and the astronaut's team were solution orientated in their tasks and continually showed strong team structure regardless of any internal conflict.

The structure of the team was in place due to the strong leadership delivered by both team captions. Captain Jim Love and Flight director Gene Crank, stayed calm and demanded the best from their colleagues. They both had earned their team's trust and added their own personal styles of leadership.

The use of structural decision making by them kept the team's focus on the goal and was a large contributing factor in returning the astronauts safely back to earth. Their problem solving ability and trust which is tested at various points in the mission.

For an example, when the astronaut's team following the instructions to build a CO filter from the limited resources available for them on the space craft. Here we can see how the teams can communicate virtually and

function effectively in critical situation. Another example of Supreme problem solving skills was, when an issue with space craft's navigation equipment.

After losing the access to their navigation tools, the team worked together to keep the earth as a reference in a Endow to avoid losing their return path.

Such a rapid reaction to serious problems could only have been achieved by team work. Appropriate level of contribution and teamwork are the key factors for problem solving and decision making. The mission intro staffs in the ground showed these characteristics in many situations. Most of the decisions they had taken in the ground mission control through a group discussion. They effectively used the brainstorming and outside the box technique to find solutions for critical problems.

The environment that Gene Crank created was that of a team work, open communication, shared knowledge, and the collaboration of a highly professional team members. He sometimes shares the aspects of the problem with the Individuals (Consultative, CLC) and sometimes with the group Consultative, CLC 1). But he is a pure autocrat decision maker, when he is declaring Failure is not an option". Leadership style and effectiveness From the movie Apollo 13 we can study the smartness of two leaders. One is the crew member Jim Love and the other one is the flight director Gene Crank.

Both the leaders never displayed any fear and they were so confident about the successful return. They always tried to transfer positive energy to the teams. In an extremely stressful situation Gene Crank is saying " Let's stay cool, let's work the problem, people. Let's not make things worse by

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guessing". This shows his ability to behave appropriate to the situation and keep others focused.

He always start delegating tasks, and set a vision for others. Overall his experience helped him to stay calm and confident in a highly stressful mission. Jim Love is an intelligent leader.

His previous experience helped him a lot to control his team in a highly stressful situation. When the ground team is asking for the exact issue, his experience counts to communicate properly " It's the oxygen tank", while his team members were looking for meter counts. Conflict resolution is another significant thing he had to deal with.

When his team member was arguing about the experience of another member, Jim Love teetering in between and trying to make them calm. The movie also snows that although leaders need loyalty and passion, it is important to secure their group's confidence first.

Application of Leadership Theories Leader Member Exchange (ELM) This movie is a good specimen for studying the leader member exchange theory. The relationship between Jim Love and Jack Swagger is developing gradually from a stranger to high quality relationship. When Jack Joins the Apollo 13 mission he was a stranger for other 2 members. Although they know each other, Jim and Jack never Nortek together before.

They started working together in a critical situation (only 2 more days for the launch). Jack fails the first time in the simulator, but Jim had faith in him and told him to try it again.

He is discussing how to make it possible instead of blaming him. After Jack captures the link in outer space, their relationship becomes more matured and the leadership character is changing from stranger to acquaintance. They had a great relationship, when they were working together for making the CO filter and when flying for the re-entry. Their relationship is gradually developing from stranger to a partner.

Situational Leadership Situational leadership is all about how the leader is able to change their style according to the situation. Marilyn, Jim's wife, is highly successful as a leader in dealing with reporters, NASA and children.

She was able to calm down the family members and her children when Jim was on the mission. When her child was asking about the problem, she was able to calm him down. During the launch also, she was able to stay calm and wish her husband a happy journey under high stress situation. In another situation, she was not allowing the reporters to stake the equipment's in error, because they didn't even care about the mission when everything was perfect.

These examples will help to understand how a leader's behavior is changing according to different situations.

Path Goal Theory In path goal theory the leader is relationship and task oriented. For accomplishing the goals they use these techniques. The flight director Gene Cernan's leadership is focusing on this theory. During his meetings with colleagues to develop the re-entry plan, he was worried only about taking the right steps to bring the astronaut's back.

He explains what the proposals are, and considers new thoughts to conclude the best way. He is supportive of everyone's ideas, clarifies the goal and uses his relationship with everyone in command to get the right solutions.

Conclusion Apollo 13 is a spectacular movie directed by Ron Howard. This film successfully exaggerates those seven days in April 1970, when the entire world was eagerly united to see if the Apollo 13 astronaut's would return to home safely or not. It is a mixture of high stress and emotional extravagance by the characters.

But I like the role of De Harris as the flight director Gene Cernan. His leadership, decision making, Problem solving, and conflict management techniques are really helpful to understand how to handle a high stress situation in a professional atmosphere.

My favorite part of the movie is when Gene Cernan is declaring " we've never lost an American in space and we're sure as hell not going to lose one on my watch! Failure is not an option! ". Only a highly powerful and confident leader has the privilege to say like that. He is a good person to have in charge during a disaster because he can make fast decisions in high-pressure situations. He is also skilled in getting desperate and aggressive co-workers to calm down and focus on the task.