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Brief: Write a blog post about Deep Sea Challenger that emphasises team work and collaboration

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Deepsea Challenger: with a good team the impossible just takes a little longer

The mission

Nietzsche said, "...if you gaze long enough into an abyss, the abyss will gaze back into you".

Now we know that's not strictly true. When you gaze into the abyss, James Cameron gazes back.

Film maker James Cameron, of Terminator, Titanic and Avatar fame, wanted to visit Challenger Deep at the bottom of the Mariana Trench – the deepest point on earth, deep beneath the Abyssal and Hadal zones in the ocean – and to become the third person to ever visit the bottom of the Mariana Trench.

The vessel

He is looking back from Deepsea Challenger, a tall, lozenge shaped submersible, built in Sydney by a highly diverse team led by self-taught engineer, Ron Allum.

The People

The team members had two common features – “they were resourceful, innovative and out-of-the-square thinkers” says Ron Allum, and they had never built a submersible before. “They had not been blinkered into conventional thinking”. The ability to “[think critically and laterally are the most important skills – skills that can actually weaken if you’re working without challenges in the same job for a long period of time](#)” said Lucy Marcus, Professor of Leadership and Governance at IE Business School and recent speaker at the Amplify festival.

“The team was formed from a wide range of backgrounds – engineers, scuba divers, people from the aviation industry, the yacht building industry and the film industry,” says John Garvin, Sphere Internal Life Support Manager. “This wide skill set allowed the team to come up with some elegant solutions to the myriad engineering problems we faced. Quite often, a solution to an individual problem was suggested by someone from a totally different background.”

Achieving success with such a diverse team chimes with a [recent Deloitte study](#) that showed that “diversity of thought can bring an organization the following benefits:

1. It helps guard against groupthink and expert overconfidence
2. It helps increase the scale of new insights
3. It helps organisations identify the right employees who can best tackle their most pressing problems

The team's unconventional solutions included designing the submersible like a sleek torpedo aimed at the bottom so that it could travel quickly to depth and maximise exploration time. James Cameron suggested attaching equipment to a carbon fibre reinforced 'whiffle ball' inside the pressure vessel rather than the pressure vessel itself, protecting the integrity of the pressure vessel, improving thermal insulation and protecting the electrics from condensation.

Other solutions came from conventional experience and hard work. Unable to find any commercially available solutions, Ron Allum applied “some common-sense SCUBA diving physics” to create his own. “It worked first mix,” he says, and has gone on to become Isofloat®, a commercial product. Marcus says that, “[Above all else, there are no shortcuts – there is no substitute for hard work](#)”.

How to make diversity equal effectiveness

So what alchemy makes a diverse team like this work together? Selection was a haphazard combination of recommendations; job advertising; role-creep, as people’s job descriptions expanded to fill a void; and mistakes where the wrong people left quickly. Allum says that team members displayed a few crucial characteristics including, “A positive attitude, resilience and a strong belief in who they were and what they could do. I knew how tough it would be in the last few months and how difficult it would be for the engineers aboard ship. They would be living and working in a confined space, getting seasick and fatigued. In that environment they would be expected to think logically and perform engineering miracles. That takes a special kind of person.”

How to implement strategic diversity in your organization

The [Deloitte study](#) goes on to suggest that you can achieve similar results in your own workplace by following these guidelines:

1. **Hire differently.** Include competencies and questions that select a cognitively diverse group of people and be willing to recruit top talent even if their strong opinions risk shaking up the status quo.
2. **Manage differently.** Managers should push their teams to use task-focussed conflict to push them to new levels of creativity and productivity in an environment where all the members of the group feel comfortable sharing their views and being themselves.
3. **Promote differently.** Sponsor individuals who represent different thinking styles and use team-based performance evaluation to encourage people to feel included, empowered, collaborative and innovative.

“Confidence was important,” says Garvin. “Human nature dictates that people try to cover up or re-direct blame on their mistakes or problems. Our approach to project management demanded 100 per cent honesty at each day’s engineering meeting. It was an open book. No one left the room until there were some practical solutions or workarounds on the table. Nothing was ever an individual’s problem. It was the team’s burden to share equally.”

Ultimately, seeking prior experience was a waste of time when assembling this team because they were trying to achieve something new. Without experience to fall back on, the team had to rely on the creative tension generated by a diverse group trying to achieve a common goal. In that environment, integrity, confidence and clear communication are essential. In this case it worked and the proof is James Cameron’s Deepsea Challenge 3D.

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