

IPLOCA Health & Safety Award 2022

Culture Development Programme - a journey, not an event

May 2022



IMPROVING LIFE BY DELIVERING...



...WORLD CLASS INFRASTRUCTURE

Entrant

J. Murphy & Sons Limited – **Culture Development at Murphy – a journey, not an event**

Profile

J. Murphy and Sons purpose is to *‘Improve life by delivering world class infrastructure’*. For us to deliver this for our customers and communities, we need to ensure we have an organisational culture where our employees live our values – so that we never harm, are confident speaking up to improve safety and quality and people feel comfortable and secure to be themselves.



Our Murphy values are:

1. Never Harm
2. One Family, One Team, One Murphy
3. Continually improve
4. Always Deliver
5. Respect, Integrity and Accountability

Murphy employ circa. 4,200 people and can have upwards of 200 live projects at any time across the UK, Ireland and Canada. Murphy have a direct delivery model but also engage a specialist supply chain to supplement various aspects of project delivery, also establishing Joint Ventures when the right opportunity is identified. This means that we can be putting circa. 8,000 people a day to work, with most of our teams being mobile between projects. Due to the size, geographic spread, and diverse group of our people this created a huge challenge in not only developing the culture we want but also sustaining it.



Due to the operational safety and quality risks of our projects, we needed a culture that supported collaboration, openness to feedback and an environment where our people feel comfortable and able to fully demonstrate their capabilities.

Murphy recognised that it’s our people that deliver success and our culture needed to support our vision and business strategy.

Our approach to developing our culture had to involve everyone within the whole organisation, our supply chain partners and clients to ensure everyone was brought along on the journey we were about to encounter

Findings

Historically the construction industry had a *‘command and control’* culture that was based around a mindset of *‘do what I say, not as I do’* and *‘I am not paid to think’*. All preventing us achieving the culture we wanted. Looking back at these traditional blockers was the starting point for us on our culture development journey.



In 2012 Murphy embarked on our journey and started an internal Culture Development Programme (CDP). Where many in our industry started to focus on a safety culture, we wanted to take a more holistic approach and focus on all of our company values. The prime reason for this was that we didn’t want to restrict our focus to just safety. Teamwork, Quality, Innovation, and Accountability were all areas we recognised as an opportunity for improvement.

All our values would underpin the culture we wanted to achieve.

From this initial project we wanted to remove the barriers within levels of the organisation and remove some of the traditional conditioning that had a negative impact to the mindsets of our teams.

Our Group Executive Committee (GEC) led this from the start and to this day are actively involved. There was no budget at this stage as those involved were all volunteers who had other roles within the business

Solutions and Implementation

We used our history and spoke with current employees to help set our five values. Following workshops with our GEC, we were able to develop our purpose, values, and vision. These would be the common thread through our CDP and unite our teams as we delivered for our customers.

Recognising that culture starts at the top, we ran various leadership and management sessions which ensured all our leaders understood that it was down to them how successful we would be on this journey. Following this, we ran a face-to-face culture research survey that highlighted our teams’ beliefs and feelings around our Murphy culture.



We then used this information to develop the four focus areas and objectives within CDP.



Following content design of CDP, the next step in engagement was to ensure everyone got the same learnings on our foundation module known as our **Hub Day**. This uses practices and models for Neuro-linguistic programming and positive psychology. From here we gave people the tools to help communication and launched an effective internal feedback process that helped remove the traditional barriers across the business.

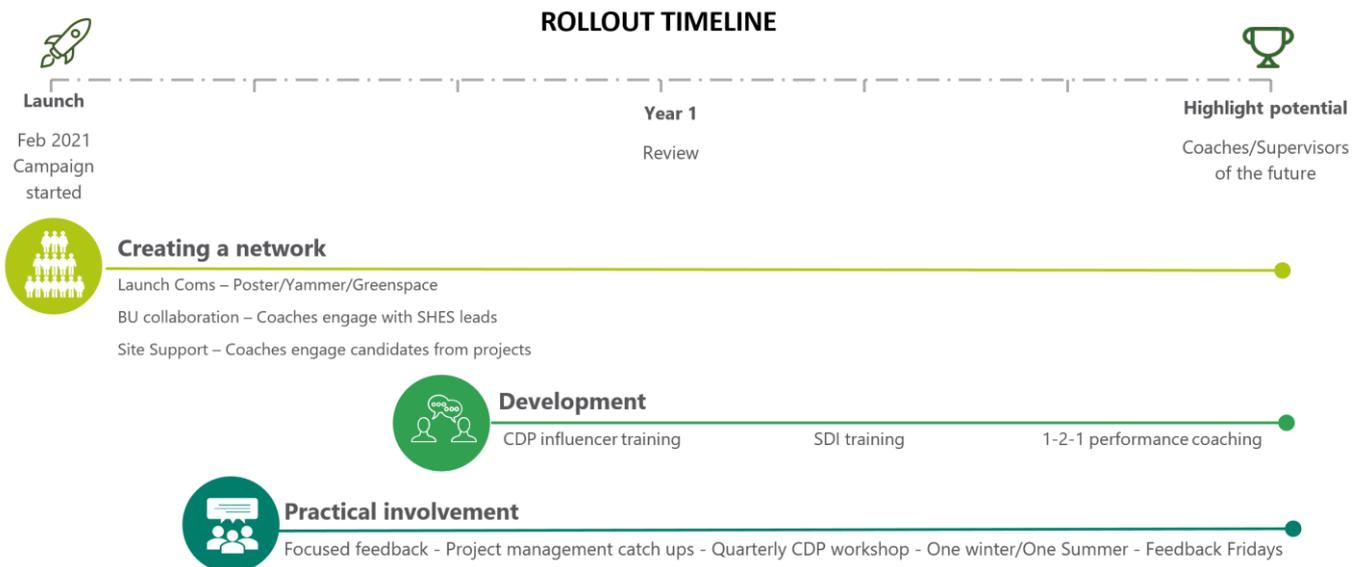


To date Our CDP is made up of 21 bespoke tools and 10 full time coaches that allow us to continually engage with our people, these tools range from:

- Front line leadership development which focuses on instilling a coaching approach to our leadership
- Integrator workshops that help new teams and joint ventures form
- Respect, Integrity and Accountability workshop which explores the sub conscious bias and how they can impact the workplace
- A network of **CDP influencers** that further promote our values in their teams
- Strength Deployment Inventory (SDI) workshops that allow individuals and teams to understand their motives and conflict triggers
- 360 Reflect and Advance feedback workshops that help collaboration and personal development within our project leaders
- The use of a Murphy bespoke Virtual Reality system that highlights individuals personal risk perception
- RM3 based cultural pulse checks to give a snapshot on business unit cultures.

CDP Influencers

A CDP Influencer ‘does what it says on the tin’ they influence their peers who they work with. Our Influencers are motivated members of our teams and have been through many parts of our programme. They have demonstrated a natural confidence and aptitude towards speaking up within a group of peers and are passionate about making a difference and keeping their team safe. This approach is vital in sustaining our culture because as research has shown, we are more likely to engage with the feedback or conversation if it’s with someone who we already have a relationship with



CDP is now fully led by our project leadership. Through a ‘CDP project leadership kick off meeting’ they decide the approach and CDP support they require across their project

Achievements

In 2021 we engaged with over 3,000 people on various workshops, modules, and coaching sessions. We also completed 380 on site visits carrying out on site coaching against real time behaviours.

The outputs from these sessions are tracked from feedback. Overall, we have achieved a score of 3.82 out of 4 on the value added from those we have worked with. 92% of our people have said that they see their manager promoting a positive culture through their actions. Progressing to this from a culture that surrounded the industry, is something we are very proud of and that our people recognise this shift makes it even more valuable to us.

Over the last five years we have been very pleased with the shift in our chosen metrics. All these areas highlight a positive shift in culture and the choices our teams feel empowered to make.

We have seen:

- A 31.6% reduction in our Accident Frequency Rate (AFR)
- Halved our Lost time incidents to 0.16
- 18% increase in our employee engagement survey response
- Achieved ‘Advanced’ level in the Investors in People (IIP) audit around ‘living the organisational values and behaviours and highly commend on ‘how CDP is embedded within the business’. Overall Murphy has an IIP silver accreditation
- Progression from ‘Standardised’ to ‘Predictable’ level of Risk Management maturity model (RM3) in most Business Units
- We achieved a Best Companies two-star accreditation in the 2021 employee engagement score - meaning we are rated as an ‘Outstanding place to work’

Sharing of feedback has increased each year since CDP started with 94% of feedback being actioned by the project teams demonstrating a culture of accountability across our teams. Detailed below are two recent Client Testimonials from Network Rail and HS2

The approach to engagement, coaching and mentoring is excellent. The use of progressive material used in the CDP is an example to the construction industry. Coaches and delivery methods capture the audience and promote thought, participation, and dialogue. It is clear that they treat engagement and coaching as intrinsic to the successful delivery of works, rather than as a mechanism to meet an obligation. If culture is measured by what an organisation does when it is not being observed, then the LM approach to engagement demonstrates an investment in their people and supply chain.

Randolph Lavelle | QHSSE Compliance Manager | HS2 Ltd

“it’s refreshing to see how Murphy goes the extra mile in supporting their front-line teams. Through their excellent CDP, they help ensure everyone goes home safe and health every day. The CDP reaches out to workforce in helping them understand, that it’s not all about delivery but also about living the Murphy values. Murphys approach doesn’t just set the foundation for a great safety Culture, it also sustains it. They use many tools like the mind mapping which helps the teams take ownership and mitigating risk. I believe the CDP really helps make the workforce feel valued and safe. It also shows the workforce that Murphy truly care about their health and Well-being. I believe the Murphy CDP needs to be mirrored by the industry as whole”. **Pete Shrader – Construction manager Network Rail**

Long Term Planning

We have designed and implement a sustainable cultural programme that has stood the test of time. Lots of companies launch initiatives to improve culture and within a few years have moved onto another. At Murphy we have built an internal programme that’s part of or DNA.

What makes our approach different is:

- Our internal coaches are homegrown and recruited from front line roles (e.g., site operative, machine drivers, Brick layers) and have extensive construction site experience. They are given in depth training in NLP and other techniques in coaching and mentoring. By following this route, we have been able to

develop a programme that takes a real and relatable approach to culture development that resonates with our Murphy teams, clients, and supply chain – especially on busy sites

- There are 21 bespoke modules that our coaches work with project management teams to tailor to the needs of the project through its lifecycle
- Our CDP coaches are supported by 68 CDP Influencers – who work on a project and can help to embed everyday behaviours that support our values
- We follow up with 1-2-1 coaching support to ensure our people are supported in implementing what they have learned
- Use of VR technology and latest science (see case study below).

VR Technology

Murphy successfully developed and implemented a virtual reality training module with the assistance of Clicks and Links. This system allows Murphy to deliver engaging, emotive and safety critical content in a manner that improves knowledge retention and drives positive behavioural change across the business.

Alongside Clicks and Links, Murphy’s CDP team have developed and implemented a virtual reality training module to supplement the delivery of a mandatory safety-oriented behavioural training module.

Challenge: In order for Murphy to guarantee they are delivering world class infrastructure for their clients; the company must ensure the workforce are fully trained and competent in the work they are undertaking. Some of that training and experience occurs on live construction sites where there are multiple hazards.



Example of a complex construction site; Plumstead Tunnel with Tunnel Boring Machine (TBM) on Crossrail Thames Tunnel Project

Large scale construction projects are dynamic and complex, and the combination of a range of hazards and variables on site results in an environment that changes quickly. This fluctuation in hazards and risks can put the most experienced workers in harm’s way, as factors like weather, location and nearby work activities can change rapidly and combine to pose a serious threat. For individuals that are inexperienced in this field, there is no “one size fits all” approach to hazard awareness and risk management. The existence, location, nature, severity and potential consequence of any hazard can change an almost infinite number of times daily, therefore a habitual and subconscious risk perception approach is paramount to ensuring the safety of construction workers.

Solution: The solution to delivering safety information about a high-risk environment? A fully immersive digital twin of a standard construction project, programmed with common yet variable hazards that may be encountered when on site.

The VR programme puts participants through their paces in a mock trip to site where they are asked to spot potential hazards. After putting on the headset, participants are transported to Murphy’s reception in Kentish Town, before heading out to site.

The production of this model and the hazards therein draw upon Murphy’s well documented historical safety performance. By reviewing the most pertinent risks and hazards across the business throughout the years, Murphy has developed a model that reflects and seeks to counteract known areas of poor safety performance. This tool allows the team to deliver “hazard awareness” content to the workforce and train their ability to recognise and mitigate risks on site.

The output from the session will inform users on where they performed well, plus highlight areas of their personal risk perception that need improvement. The tool works on a fix / consequence basis, as hazards that are correctly addressed will revert from the “risky” state to a safe state. Conversely, hazards that are not addressed will demonstrate to the user the serious consequences of lack of intervention. For example, there is an excavator located dangerously close to high voltage overhead power lines – if the users fails to spot this, the

Culture and Engagement team will bring them back to the point and it will show the excavator touching the lines with sparks and smoke emanating from the machine. Data gathered throughout this task can be used to give the business more information about what training is required and where.



Screenshot of virtual reality model including dynamic hazard spotting

This solution was developed as an alternative to standard virtual reality training modules, as they operate on a multiple-choice basis that prompts the user to select a response at predetermined point in the model – this is not representative of a construction site and would not provide Murphy’s workforce with adequate training and preparation. Instead, Murphy opted for a more natural approach that would better test the risk perception of its workforce, incorporating dynamic and randomised scenes that emulate real life conditions.

The system is also used to give people in an office a better understanding of site environments and risks even if they’ve never been on site before – optimising workflows between different functions and teams

Benefits: A reduction in staff on site results in a reduction in risk. By exposing the workforce to a lower level of risk, Murphy can keep on living true to the company’s ‘Never Harm’ value and its ‘Fit to Start’ strategic driver; making sure everyone is comfortable and proficient in their ability to question and action on site risks. This work ensures that the entire workforce, both existing and new, is aligned to the strategic direction of the company.



Virtual Reality training system in use by Murphy workforce

The immersive nature of the VR system means that the users are absorbing more information about site hazards, better preparing them for the real thing. It is a safe environment in which to experience and explore the hazardous world of construction, allowing Murphy to fully brief and train its workforce from the safety of an office, eliminating the risk of on-site exposure to hazards. In accordance with the challenges outlined in the UK Government’s Sector Deal and the Industrial Strategy, Murphy is actively investing in its staff to improve productivity, upskill the workforce and guarantee them a higher earning power.

Feedback from end users: Following a successful nationwide pilot programme, there is excitement within Murphy as the business is leveraging modern day technology to an even greater extent. Users of the system have remarked upon the realisation that the system has highlighted their “factory blindness”. For some experienced staff, a

lifetime of working in high-risk environments has bred in a level of complacency. This is actively challenged, identified and rectified through the use of the system.

Derek Stringer, Rail Supervisor, said “I thought the interaction with the VR was spot on, a total game changer. It really sets us apart on our training days. It really gives you something different to think about, seeing issues in real time and trying to get an understanding of what we should and shouldn't see out onsite. I think VR has a big future in our industry, I don't see a reason why you can't use it to promote all the good things we do to our clients and even use it as a walkthrough of how future projects will look when complete. A definite positive tick in the box for me.”

Over 50% of the users would not usually come into contact with such advanced technology – due to either job role, reluctance or in some cases fear. The feedback from the majority of users has been that the system provides a user friendly and truly memorable introduction to some of the most advanced hardware and software currently in use within the industry. Feedback has shown that the use of this system has effectively helped reduce the reluctance and fear to embrace new technology.

The introduction of this system has sparked a wave of creativity and innovative thinking across the diverse Murphy family. The VR system is novel for most, and engagement with it has inspired the majority of users to challenge their own working processes in terms of safety, sustainability and efficiency, in turn driving the business and the industry forwards

Future Outlook: In the future, this technology could be used by Murphy as a standard response to safety incidents across the business, and the wider industry. By supplying the workforce with cheap “cardboard” type units, Murphy will be able to distribute highly engaging and emotive content around safety alerts and site inductions effectively, easily recording engagement and view count.

It could also assist in incident reporting as teams will be able to explore mock-ups of incidents, allowing a thorough root cause analysis to be undertaken and appropriate mitigations implemented.

Now that Murphy is using advanced virtual reality models with dynamic construction sites, the scope for future opportunities is vast. There are a plethora of potential applications within the design and engineering functions, including collaborative remote design review meetings, construction sequencing, and planning and logistics. Many designers are now adapting their workflows to use the virtual reality systems as their main design tools, meaning that future projects could be built entirely from within a virtual model with a greater level of speed and quality.

There is also an opportunity for Murphy to begin to generate 3D content within other functions such as safety, procurement, environmental, quality, operations – all of which can exploit the system to access contextual and relevant content in a much more engaging way.

Murphy continues to develop its ability to capture, analyse and interrogate data from a variety of sources. Going forwards, more opportunities will arise to integrate this system into existing workflows to improve the way that Murphy staff interact with the data they generate

Conclusion: This project represents a positive step for Murphy and is an exciting move towards a safer industry. The solution deployed by Murphy in response to training challenges, and to make sure staff are always fit to start, paves the way for further work in the virtual reality realm, bringing with it exciting new prospects concerning design, engineering, planning, logistics – all of which could see a step change in culture, collaboration and capability as a result.

Murphy's purpose, to improve life by delivering world class infrastructure, has been achieved through the successful implementation of this system. The VR training module both improves and sustains life of the workforce, their families, and the communities that Murphy operate in through an increased hazard perception and mitigation capability.

World class people deliver world class infrastructure; by investing in and improving the capability of its workforce, Murphy ensures that construction teams are operating in the safest manner possible. This minimises accidents, incidents, stand-down time / waiting and programme delays, guaranteeing world class delivery every time

Summary

Our CDP will continue to be a journey not an event, ensuring we consistently live by and deliver our Value and Purpose.



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