Good evening, it is indeed an honour and privilege to be invited to address you this evening- the topic is very dear to my heart and is without a doubt one of the greatest challenges and opportunities of our time – the question is are you ready for it?

Much of the anti globalism and nationalism sentiment we’re witnessing around the world is a direct consequence of people feeling left behind – we’ve managed to create many new and exciting careers without enough thought for those swept aside by the changes

These changes have always occurred, mostly spanning generations, now however they’re happening far more quickly

My presentation is very much directed to how GHD is dealing with these challenges and transforming our business to continue to add value in a changing world but everything mentioned is relevant to all of us, no matter what industry we work in.
A little about GHD and myself

GHD was founded in 1928 and over that time has evolved into a global professional services business specializing in the market sectors of Transport, Water, Property and Buildings, Energy and Resources and Environment with over 8500 people worldwide and a turnover in excess of AUD1.7 billion. Our business is 100% employee owned, approximately 25% our people own the company, making us the sixth largest employee owned professional services business in our industry in the world. Over the years we’ve had to diversify not only the services we provide but also the markets we operate in in order to grow.

A bit about myself – I’m a proud husband and father of two teenage boys, an avid sportsman, my personal passion is kiteboarding, mountain biking and cycling and when we have
time we enjoy to travel. Professionally I’m a civil engineer with qualifications in engineering, economics, law and accounts.

I regard myself a global citizen as I’ve had the privilege of travelling and living in many parts of the world and I’m proud for the last 18 years to call Australia home.

In my presentation tonight I’ll start with a number of very brief examples of disruption being experienced in a few different industries, highlighting why everyone is talking about it.

I’ll provide some thoughts on why we believe the world is changing so fast

And I’ll share some thoughts on what some of the impacts might be on business

And finally I’ll cover what skills we believe will be required to be successful in the future
I have four very different examples of emerging disruption in different industries that I’d like to share with you.
The first example is in the food industry where 3D printing is changing food production as we know it.

3D food printing offers a range of potential benefits. It can be healthy and good for the environment because it can help to convert alternative ingredients such as proteins from algae, beet leaves, or insects into tasty products. It also opens the door to food customisation and therefore can cater well for individual needs and preferences.

Moley, Robot kitchens established in 2015 launched the first intelligent robot that can cook as well as a Michelin chef – the robot learns to do exactly what the human chef does. The Chef that can cook 2,000 meals at once and goes on sale this year

This invention have the potential to disrupt the food and
hospitality industry.
The second disruption is in the construction industry

A San Francisco-based start-up Apis Cor built a whole house in a Russian town within 24 hours.

It didn't repair an existing home or use prefabricated parts to make that happen -- the secret lies in 3D printing. The company used a mobile 3D printer to print out the house's concrete walls, partitions and building envelope.

Workers had to manually paint it and install the roofing materials, wiring, hydro-acoustic and thermal insulation, but that didn't take much time. The result is a 400-square-foot house. What is the future of building and construction with 3D printing?
The third example of disruption is in healthcare

23 and me, the saliva based DNA testing business that connects you with your ancestry is in fact collecting your personal medical history as their real goal is to hoard your personal data, and ultimately deliver **PERSONALIZED MEDICINE**

IBM Watson - 78 percent faster than a human, reducing screening time of patients from 110 minutes down to just 24,

Medical assessments by Watson are the same as a human doctor 96 percent of the time for lung cancer, 93 percent of the time for rectal cancer, and 81 percent of the time for colon cancer.
Lastly in travel a hyperloop is a proposed mode of passenger and/or freight transportation, first named as such in an open-source vactrain design released by a joint team from Tesla and SpaceX. The heavyweights such as Google, Uber, Boeing and Airbus are all investing heavily in this technology.

Another nimble start-up is Lilium. Lilium enables you to travel 5 times faster than a car by introducing the world’s first all-electric vertical take-off and landing jet: an air taxi for up to 5 people. You won’t have to own one, you will simply pay per ride and call it with a push of a button. And make it as affordable as riding a car. (Note, riding a car, not owning a car!)
So after briefly considering a few of the disruptions of the future we’re fast moving towards zero marginal cost of computing.

The First Industrial Revolution used steam power to mechanize production.

The Second used electric power to create mass production.

The Third used electronics and information technology to automate production.

Now a Fourth Industrial Revolution in he words of Professor Klaus Schwab (Founder of the World Economic Forum) is characterized by a fusion of technologies that is
blurring the lines between the physical, digital, and biological spheres.”
Global leaders are all talking about the new future and the need for change – for me the key message is we’re going to need to learn to adapt to change and accept that we’ll need to keep learning new skills to remain relevant.

SO WHY IS THE WORLD CHANGING SO FAST
For GHD Digital technologies such as smart mobile devices, 3D printing, virtual and augmented reality, cognitive computing and the Internet of Things are changing our clients expectations and how they develop and deliver their products and services.

In addition, use of social media networking platforms have changed the way we hire, manage and support people. We have an emergence of new companies that are disrupting industries.
Examples of these emerging organisations include

- Tesla – Cars & Energy Storage
- UBER – Cars & Food Distribution
- Apple – Music, software app distribution
- FujiFilm – Cosmetics
- Space X – communication with +4000 satellites

Many new organisations are emerging to serve this new world – key for us at GHD is to consider how we fit in and add value in the future
Globalisation is the second reason the world is changing so fast – it has accelerated with the growth of emerging markets and trade liberalisation.

These changes are creating new competitors, different supply chains and significantly lower pricing points. GHD has become a truly global firm in the last 4-5 years with a footprint in USA, Canada, Chile, UK, ME, China, Philippines, Australia and NZ with projects delivered from anywhere in the world.
The third reason is people are living longer and the aging population is impacting many industries from health care to real estate.

Changing demographics is impacting our global business with many long-term employees who have been with us for more than 2 decades needing to reinvent themselves to continue to add value to the business. The onus is on us to retrain them and create meaningful careers for them. I mentioned this in my introduction and believe it is key to our success.

I would expect more than 50% of our workforce will be Millennials in the next 5 years. Changing demographics is therefore clearly impacting our business.
SO WHAT ARE SOME OF THE IMPACTS ON OUR BUSINESS
New technologies and partnerships are allowing firms such as GHD to evaluate every facet of how we go to market such as: services, value propositions, target customers and price points. We need to constantly reposition ourselves with new services for the digital world and foster a system of partners across the industry value chain and beyond.

Organisations that enjoy a monopoly today in their industry can no longer take comfort in their market leadership. Many of our client’s industries are getting disrupted. The traditional model of competition makes very clear who the competitors are. With the coming of the digital era, the lines of competition are becoming blurred with new competitors entering the industry from outside the industry.

These rivals offer a unique value proposition and use new business models to serve customers. Business model transformation will become an important factor for the viability of many businesses in our clients and our futures.
Secondly expertise, the primary offering of the engineering consulting industry and businesses like GHD, has traditionally been provided by people.

Emerging technologies however, such as virtual and augmented reality and artificial intelligence are enhancing the capabilities of our people.

This can enhance the quality and volume of expertise, and lower the cost to serve our clients. We recently acquired a virtual and augmented reality business to create visual models for our clients.
Thirdly, the pace at which we change our business direction is becoming critical. We, at GHD need to anticipate change, react faster than our competitors, and adapt our strategies and processes in light of changes in the industry.

Firms like ours are becoming more responsive by adopting a flexible workforce, promoting an agile culture and investing in smart digital infrastructure to encourage both productivity and creativity.
We are an employee owned company and therefore, employee experience equates directly to the success of our company.

We are required to rethink the kind of employee experience we should offer in the digital era. Not only are we exploring new models to source talent, but we are planning to leverage new tools to maintain a high level of engagement with our people.

We need to ensure our employees are appropriately trained and dynamically managed to address the rapidly changing needs of our clients.

If we don’t do this well we run the risk of losing good people.
Lastly, we have built up large amounts of data about our clients' assets. Data analytics is becoming an important new service that allows us to strengthen our existing services, or to offer new ones.

We now have capabilities to convert this data to high-quality insights and information and fully expect this to continue to evolve.

We recognise the excellent potential of turning our clients' data into strategic assets. We have more than 100 people who can do geospatial analytics and a significantly larger team that can do diverse data analytics across the world.
So, that’s quite a lot to absorb and a lot of change to contemplate in the very near future.

I propose we’ve always had to change and adapt to survive, the only difference we’re experiencing is the pace of change no longer spans generations but is happening within one’s career multiple times.

BEARING THIS IN MIND, WHAT ARE THE SKILLS WE BELIEVE ARE REQUIRED TO BE SUCCESSFUL IN A DISRUPTIVE WORLD?
Firstly in the new world, we need curiosity and imagination to reimagine various possibilities for value creation and to then make them happen.

Curiosity allows our people to continually learn, grow, and question the world in which they live.

Increasingly we at GHD are seeking people who can think “outside the box” and create new value for clients.
Secondly, in a truly globally connected world, collaboration, networking and influencing skills are becoming critical for success.

We as a global firm, rely on our employees abilities to collaborate, network and influence both internally and externally.

Leadership among a team is no longer about commanding with top-down authority, but rather about leading by influence. We need to influence diverse groups to help create alliances to achieve common goals.
With information overload and biases in what we see and hear today through carefully choreographed media coverage on the various print and online platforms, critical and objective thinking is an important skill to ensure populist thinking is avoided or at the very least questioned and principles of equity, diversity, integrity and freedom are respected and maintained.
Another skill that is required today is the ability to assess and develop content and then use different media channels for persuasive communications. New media sources such as videos, chats, blogs and podcasts become dominant both in our personal and professional lives. I’m sure the parody between this point and the previous one I’ve just made is not lost on you.

Social dialogue in communication is becoming important. I’m sure we’ve all heard people talking about the power of influencers on social media.

It’s important to recognise clear communication isn’t just a matter of proper use of language and grammar. In many ways, communicating clearly is an extension of thinking clearly. Can you present your argument persuasively? Can you inspire others with passion? Can you concisely capture the highlights of what you are trying to say? Can you promote yourself or a product?”
Non-Linear thinking and dealing with complexity is becoming a common requirement of our people. Many of our clients challenges are becoming far too complex to be solved by one specialised discipline as they are multifaceted problems.

We need people who can concurrently work on multiple issues and have the ability to understand concepts across multiple disciplines.
Increasing the ability to translate vast amounts of data into useful information and insights is becoming critical. Our employees will need to more adept at utilising new tools to help them deal with vast amounts of information and be able to make sense of it.
We require people who are agile and adaptive to unpredictable consequences of disruption. We are increasingly operating in a chaotic and dynamic business environment. Agility and adaptability are vital skills.

This doesn’t mean we don’t need a long term vision or a strategy to achieve that vision, it just means that we will need to flex more in the tactics we apply to achieve our strategic objectives.
The days of everything being clearly defined before execution are unfortunately over. We all will be facing more and more economic, social and political volatility.

We need people who have skills that help us sail through changes, turbulence and instability, and all the time being able to operate with a level comfort with ambiguity.

Being a firm with a large number of engineers and scientists many of our people operate in a “black or white zone”. Although uncomfortable, we are training our people to become more comfortable with shades of grey.
Regarding diversity I believe the most effective teams are truly diverse and have a combination of different ages, skills, disciplines, and working and thinking styles.

Cross-cultural competency is an very important skill for all our employees as we operate in diverse geographical environments. We believe diversity is a key driver of innovation and business success.
And finally, I believe having a vision for our personal and professional lives is important to leading meaningful and purposeful lives.

All my life I have been very certain what success looked like for me, both personally and professionally – my vision is clearly not right or attractive for everyone but it is appealing to me – I challenge you to find yours ..................

In closing then to summarise change is constant, those of us who adapt to change are going to thrive, the future is bright and exciting with amazing options available to us in all dimensions of life.

If we have the right mindset, we can have it all, remember If you believe you can, or you believe you cannot, you are right.
Thank you!

Ashley Wright