It was a sunny Saturday morning. I had entered the paediatric cardiac operation theatre (OT) of a tentacled modern hospital complex. Just when I was to begin the preliminary introductions with the OT staff, a 1-day old intubated neonate, placed on the OT table, drew my attention. The injected general anaesthesia had assumed complete control of the infant who was to be operated for a procedure called Arterial Switch Operation (ASO). I learnt that since the 26th week of gestation, the foetus had been monitored. And since the infant had arrived into the world, just a day before, with very low oxygen saturation levels, the cardiovascular surgeon had called for an emergency case.

The actual surgery was as complicated as the name sounded to me. As soon as the items on the ‘pre-op’ checklist were in place, the chief surgeon was in, and the procedure took off. Within few minutes, the neonate was cut open at its chest, for us to see the tiny heart fluttering rapidly. For a layman, the surgery involved swapping the two key blood vessels – the aorta and the pulmonary artery – at their roots. The procedure required transferring the patient on a ‘heart-lung’ machine (i.e. temporarily stopping its heart) and clamping the aorta (the major blood vessel that carries blood from the heart to the body). Extensive in nature, the operation warranted the infant to be connected to more than a dozen devices and instruments. Every tiny orifice of the tiny life was inserted with a tube.

By virtue of my career profile, attending surgeries in order to oversee the performance of the products I handle is one responsibility in addition to many that include strategizing and marketing my products. So far, I have witnessed 60 odd surgeries, those of cardiac, plastic, and opthalmic, and have been awed by the complexities each one has had. Operation Theatre, as the classical definition says, is a facility within a hospital where surgical operations are carried out in a sterile environment. But, if I were to redefine it, it is a workplace, nay a battlefield, where the warrior (surgeon) with his army (team of assistants and nurses) is battling for his
kingdom (patient and his family) against their bitter enemy (disease) with a loaded arsenal (sophisticated technology) at their disposal. By far, it is one place I have come across that is pervaded with intelligent technology, but is prevailed by human judgement, skill, and confidence. It is always startling to see how fundamentally human in nature, no matter what, this workplace is.

Back to my story. The surgeon’s moves unfolded effortlessly. With his experienced hands, he navigated through the latticework of blood vessels. The communication among the operating team was impeccable. Just by the expressions on the surgeon’s face, the nurse knew what instrument he was in need of. After all, all of them shared one objective – a successful surgery – and there was no room for error. He switched the two arteries and restored them to their correct positions within the heart. After seven long hours, the operation came to an end. Initially connected to an echocardiography and later to a ventilator and a temporary pacemaker, the neonate was transferred to the cardiovascular intensive care unit whereas the surgeon pulled off his gown and left the operating room thanking his team.

**In the world of Medicine and Surgery**

The culmination of technological advances and their constant progress has had an impact on every nuance of our life. Better connected workforces, collaborative and less hierarchical organizations are just some of the manifestations of the advent of disruptive digital technologies. In order to reap the benefits of the revolutionary breakthroughs, workforces have been forced to evolve or rather be prepared to confront deep shifts in the way organizations will be lead.

Peter Drucker found answers in art and architecture; I found them in the world of medicine and surgery. I saw that technology and humanity are not necessarily incompatible, on the contrary, they bolster each other’s existence. What is true of surgeons and their teams is also true of employees and the organizations. From surgeons we learn the “human difference” they bring even while using the latest in medical technology. I distinctly remember a general surgeon telling me when asked
more about what it feels to be a surgeon, “We don’t just open the patient, fix the issue, and close him. We heal him.”

Dr. Atul Gawande spells out through his book *Complications*, “We look for medicine to be an orderly field of knowledge and procedure. But it is not. It is an imperfect science, an enterprise of constantly changing knowledge, uncertain information, fallible individuals, and at the same time lives on line.” In such scenarios, where tangible and intangible factors are at play, there can’t be a better way to fool ourselves than by relying solely on machines. It’s much more to be a human who is equipped with both, experience and intuition.

Let me quote another example.

In recent months, I had the privilege of meeting a renowned and a leading cardiothoracic and vascular surgeon in India. The surgeon, by far, has performed more than 18,000 cardiac surgeries and has the credits of being one of the first few ones in India to perform the “Beating Heart” Bypass Surgery, the “Minimally Invasive” Bypass Surgery, and the “Awake” Bypass Surgery. He vividly recalled to me the days when he was criticized by his Western counterparts for defending his inventive “awake surgery”. The awake surgery was a form of bypass that would not require any general anaesthesia or blood thinners, and the patient would recover much faster than he would from a traditional bypass surgery, for there was minimal intervention in the natural working of the system.

He says people wrongly understand the concept of Minimally Invasive Surgeries. In such procedures, the focus has to shift from minimal physical invasion to minimal physiological invasion. The size of the incision should not be the source of awe, but only when the surgeon less disturbs the original anatomy and still corrects the problem at hand, does he move closer to being a God! He has rejected, over the years, several surgical robots and keyhole surgery kits, for they never justified the benefits or the costs. Instead, he has sought tools and techniques that yielded improved results. A mere reliance on latest technologies is not always a solution,
especially in a country like India which is still plagued by a fractured healthcare system with a lot of poor patients awaiting their turn to be cured.

Claiming our Humanity in the Digital Age

I have been a part of the medical devices industry for the last two years, and most of my experiences are replete with instances that taught me beyond surgical procedures and products. However, as said earlier, my job responsibilities do not restrict me to the operating room, and consequently I spend much more time with and within teams, and not to forget that each of us exists in the new digital era.

All the digital technologies that intersperse our life are nothing but creations of a human brain. The profound impact these technologies exert on us make it a mandate for us to raise our abilities in order to sustain in a growing digital economy. Technologies such as analytics, nanotechnology, artificial engineering, robotics, big data, are essentially human-centric in nature; for they were not introduced to supplant human intelligence or existence but to augment the individual and the collective ability of human beings.

Mark McDonald in his blog The Digital Worker Redefined pointed out, “The real digital revolution is in the ability of humans to create value. Without that change, every person becomes a fungible resource, readily replaced by technology, customer self-service or information.” What he points out to us is easier said than done; in fact, this is what even the renowned cardiac surgeon meant when he outright rejected some of the latest medical innovations. But then, how exactly do we create this value?

Digital technology holds the power to amplify human performance through its breakthroughs; and one of the key potential of this technology is the ability it has to shift the focus from process to people. Just as technology can eliminate inefficiencies or influence the way organizations are managed, the technological age demands a change in leadership styles at every level. The “Knowledge Worker” that Peter
Drucker spoke of years back, is more abundantly available now than ever. However, retaining this knowledge worker is no simple task for even some of the gifted managers. These workers are curious, smart, and technologically proficient and they need to be furnished with an environment that is driven by purpose, merit, trust, and transparency. Just as surgeons, despite surrounded by technology, let their experience, judgement, and moral responsibility to prevail a circumstance; the knowledge worker too has to be granted liberty for him to realize his full potential and must be endowed with recognition that he seeks the most.

What Surgeons and Surgeries Teach Us

Coming back to where it all began. Through all the surgeries that I have been a part of, I came across mavericks, who with their groundbreaking research and unconventional approaches to surgeries have redefined the way the medical fraternity thinks about those fields. Enriching discussions with these masterminds have left me astonished with the amount of inspiration individuals, teams, and organizations can draw from them. Here are just some of the rules that changed their games and those that also have a lesson or two for us -

- **Create your Brand**
  Creating your identity in the technological age is as imperative as being aligned with the advances one is surrounded with. Working towards becoming an indispensable member of the team or an organization is one of the ways to ensure ones continuous emergence in the changing times.

- **Never stop Learning**
  This is one thumb rule that probably applies to every industry one is a part of and holds true irrespective of the age one is living in. Most of the surgeons I have dealt with have been in their late fifties, some even in late sixties, but the vigour with which they work to make a difference to their field of interest has always left me awestruck. Builders of a reputation of lifelong learning is what defines them aptly.
• Lead your Team to New Heights
Just as I have seen the entire operating team while in action in the operating room, I have also observed the entire team off its battlefield. The importance each time a surgeon grants his assistant surgeon or his nurse after a successful operation, indeed makes them feel valued for their contribution. Making one’s team member or a peer realize what he brings to the table does intensify the meaning and the existence of the team.

• Rewards are proportional to Risks
Had the cardiovascular surgeon I mentioned never risked endorsing his idea of an unconventional surgery, the medical world today would have been deprived of a pathbreaking innovation. Those who do not take risks rarely advance the field they work in.

A Final Thought to Ponder

“The empires of the future are the empires of the mind.” ~ Winston Churchill

An ever-convincing description of humans I have come across is, “Human beings are somewhere between a hurricane and an ice cube: in some respects, permanently mysterious, but in others – with enough science and careful probing – entirely scrutable.” It is this very mysterious and scrutable nature that makes us unique for what we are. The human element that moves from rationalization to augmentation, gets us into an ever-evolving process of constant learning and value creation. And although, the learning curve does get steep at times, human beings keep embarking upon it over and over again.
Resources:
2) Lessons from a Frugal Innovator | The Economist (April 16th 2009)
3) Complications, Notes from the Life of a Young Surgeon by Atul Gawande (2002)