TATA CONSULTANCY SERVICES

Adapt and Plan for a Comeback

Oil & Gas and the need to realign business as demand dampens, supply increases

Energy & Resources Industry

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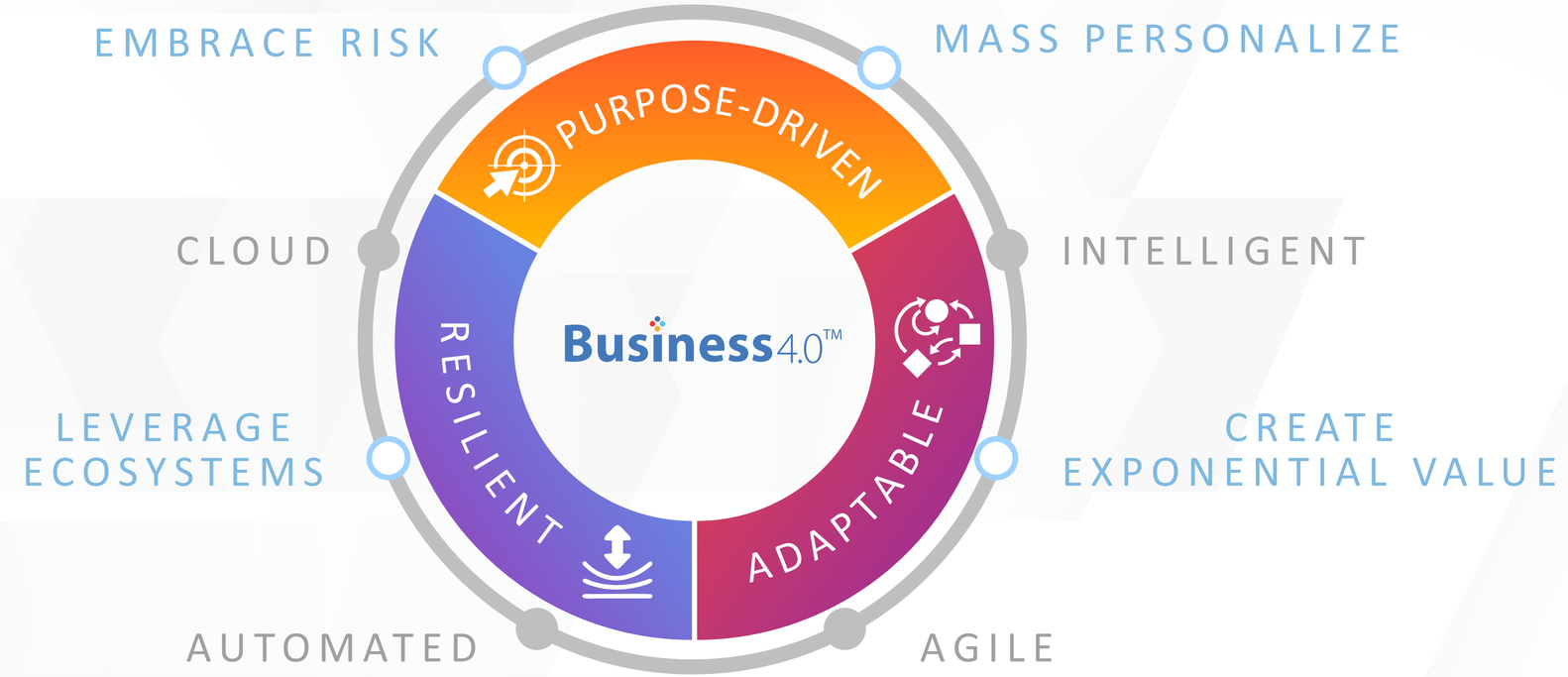

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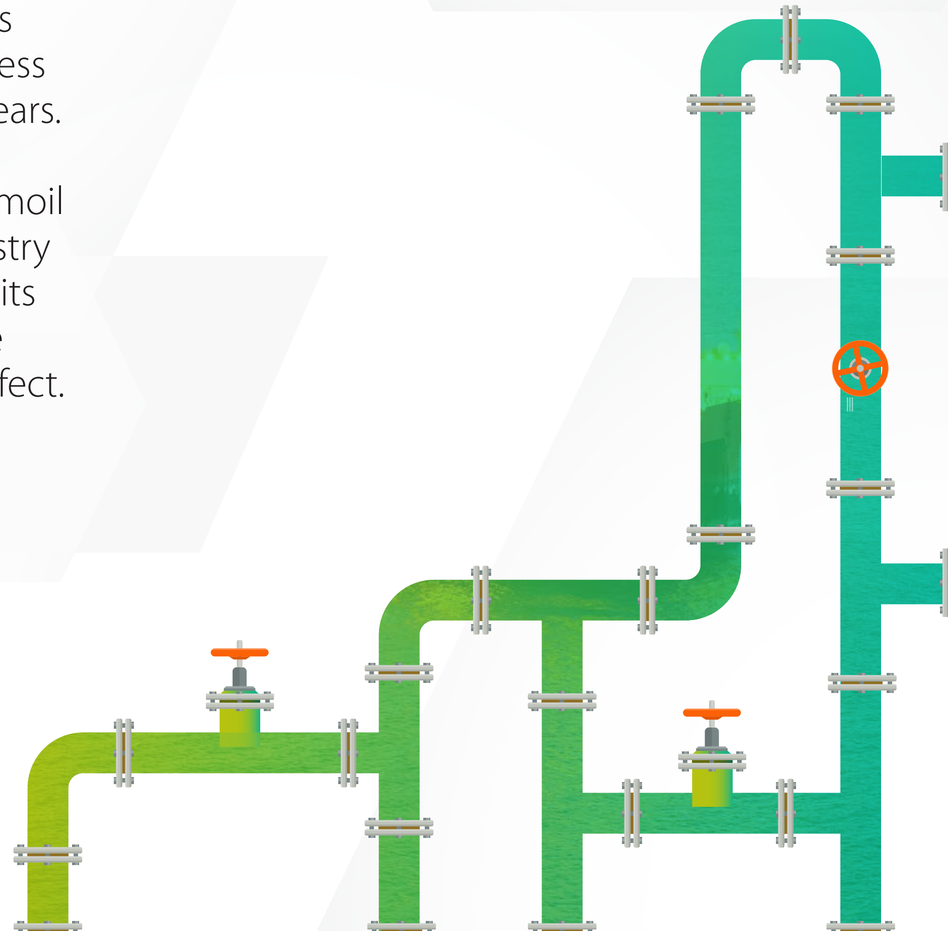
Introduction

Given the span of the COVID-19 crisis, it is safe to assume the way of life and conducting business will witness a dramatic change going forward. The anxiety, both human and economic, that has ensued has also meant the traditional business models are not prepared to swiftly switch gears.

While the Novel Coronavirus has caused turmoil for businesses in general, the Oil & Gas industry was already facing some serious troubles of its own making even prior to the crisis with the supply and demand imbalance already in effect.



The Glaring Supply-Demand Mismatch: This is Where Our Story Begins

The COVID-19 crisis caught up with the oil and gas industry while it was seesawing between oversupply and low demand. While we do not have many checks in place to contain the supply, the pandemic has done its part in further depressing demand. The impact of the pandemic is primarily being seen on the demand side with an unprecedented drop in general, for the industry, but particularly for oil and gas. To put this in context, it is estimated that the traffic across the Golden Gate Bridge fell by 71% compared with a year ago (source: Bridge Spokesperson in Wall Street Journal), while the global aviation industry reported the number of seats for sale as of April 13 at one-third of those in January (Source: Wall Street Journal April 15, 2020).

Some of the unprecedented outcomes triggered by the COVID-19 crisis include the futures contract for May delivery for a barrel of WTI (West Texas Intermediate) dropping to negative territory for the first time in history (lows of negative USD 40). In other words, traders were paying people to take the crude off their hands as they ran out of storage space. The picture was somewhat better with futures contract for June delivery that closed at USD 15.06 per barrel on June 29. There is need to mention that the benchmark price stood at USD 60 at the beginning of the year. (Source: Wall Street Journal June 30, 2010).

The estimates for current dropped demand vary compared with 2019 ranging between 65 million barrel/day and 80 million barrel/day, translating to excess production of 20-35 million barrels a day (IEA estimates per day drop of 29 Million barrels). Given the drop in consumption and no checks on supply, the excess production has been relegated to storage. However, the volume of unabated supply has also meant that the global storage capacity is also close to saturation point. The volume of crude stored on offshore ships has jumped by 70% since the beginning of March while the onshore capacity is estimated at 85% capacity (Source: The Economist April 25, 2020 issue). While on the one hand the current situation poses a problem for those dealing with storage capacity, on the other it is a boon for players like Saudi Arabia that control the largest global storage capacity.

To deal with this unusual situation the Railroad Commission of Texas (regulator of oil & gas activity in Texas) are discussing enforced reduction in production from Texas producers, something that has not been done since 1970's.

Assessing the Impact

At first glance, the current downturn may look like a deep but traditional cyclical event in the commodity driven market. We see the initial reaction to the crisis has been traditional and focused on containing costs and conserving cash. This we feel is a mistake, as the current market dip will last much longer than expected given the impact of COVID-19 is not limited to the oil and gas market but societies globally. There are a number of factors impacting demand for petroleum products. Here are a few examples of the impact from the crisis:

- In the last six weeks, the US recorded over 30 million jobless claims, much higher than the record of claims of 2.7 million in 1982.
- GDP contracted at a seasonally and inflation adjusted rate of 4.8% in the first three months (Source: Wall Street Journal April 30, 2020).
- The occupancy for airline passenger seats has dropped 60% since January 20, 2020.
- The global lockdowns have reduced the number of vehicles on the road and consequentially the demand for petrol. The demand for petrol and diesel has dramatically reduced to the extent that some refineries will not be producing any more petrol.
- China's GDP fell to 6.8% in the first three month of 2020 ending four decades of growth. This will translate to a substantial Impact on demand.

These numbers are staggering and combined with the 8.7% drop in the US retail consumption in March, point to a much longer and slower pace for the recovery. It also needs to be noted that we are yet to develop a cure or vaccine to treat the COVID-19 virus.

While there will be a substantial economic impact from the crisis it will also culminate in a lasting effect on the societies across the world. However, the entire veracity of the impact from the pandemic and if it will fundamentally alter the demand for oil and gas will only be clear over time as more people take to remote working, international air travel reduces, and companies work to bring supply chains closer home to avoid future disruptions.

Evaluating the Past to Plan for the Future

A quick recap of the supply and demand problem faced by the industry shows, the average crude oil production in 2019 stood at 100.57 million barrels per day with consumption at roughly 100.75 million barrels per day (Source EIA – Energy Information Administration). In addition, the US production for 2020 was projected to increase with new sources of crude to the tune of 2-4 million barrels per day coming online (Source Wall Street Journal and JPT Journal of Petroleum Technology). On the other hand, the demand for crude oil has been on the decline with further drop expected in 2020 on the back of economic weakness, especially from China.

Oil price (WTI) was already hovering USD 50's in late January. However, despite the depressed pricing, Russia and Saudi Arabia could not agree on reducing production in collaboration with OPEC. Instead, they initiated a market share war by significantly increasing production, which only helped further erode the price. Essentially, not only did we fail to secure a balance between demand and supply but took steps that would only worsen the problem. Early March Saudi Arabia went on a tanker hire spree and contracted 24 VLCC's (Very Large Crude Carrier) anchored in Singapore. Several of these are now sailing towards Houston. It also needs to be noted that the latest OPEC agreement to reduce production, with an unprecedented volume of 9.8 million barrels/day, has already been discounted by the market and has done nothing to help stabilize the industry. Some members will not comply while others like Saudi Arabia and Russia agreed to the reduction from a higher than normal base. The effect is that the real cuts will be more like 7.5 million barrels per day (Source The Economist April 25, 2020 issue). Additionally, hopes of a respite remain a pipe dream with new planned projects in Norway, Guyana, Australia and Brazil coming on line in 2020/21.

Adapting to Redraw Future Plans

As the crisis and the responses continue to evolve, there are immediate actions and medium-term considerations to view that will help restructure the business models as we get on the road to a longer-than-expected recovery. The Oil & Gas industry either have already started or are in progress of initiating corrective actions like reducing headcount, writing down assets, closing non-performing businesses, closing and merging field offices, and reducing/eliminating dividends to preserve cash. Here are some segments that we feel will be transformed to address the impact of the pandemic, going forward:

Automation

Accelerating initiatives to automate work processes wherever possible will help reduce the dependence on people. Some examples include, the ongoing effort to create automatic seismic interpretation, eliminating the geophysicist, and automation and remote operating of drilling rigs to de-man drilling operations to reduce the HSE risks. We believe, new and emerging technology in AI, VR and Robotics with speed up this process.

Oil Field Services

For Oil Field Service (OFS) companies that provide staffing services at client premises will have to rethink the ways they can offer remote services to minimize both travel and close staff interaction. This can be ensured by investing in automation.

Personal Interaction

It is likely that the way we interact and collaborate professionally will change going forward. Several businesses have found that they can continue to work well without having the staff in the office and by using tools like Microsoft Teams and ZOOM. The lessons learned from this separation period to modify our work to use these technologies effectively will help better organize the work and the workforce. Will we even need to go to the office when we already have the information and tools available at home? I guess, we will find out.

There are also some unanswered questions about the work and workplaces going forward. Given the crisis is an evolving situation it is worth pondering what **future changes we can expect to the way we work.**

Certification

There is a strong likelihood that some kind of proof on non-infection, past infection or eventual vaccination will be required in many places. On the external side, we may see countries requiring certification before allowing entry or visa approval. On the professional side, we may look for certification to work at well site or offshore. Internally the companies may require employees to provide certification as a condition of employment. If this does become reality, we may need to think of ways to comply with privacy laws etc. in various countries.

Office Design

Given social distancing is set to be the new norm in the near term future office landscapes will also have to be reshaped. It is likely that sharing an office may not be permitted or advised and we may also see the implementation of the distancing rules. We have already moved to collaborating through on-line tools and this may likely become the standard way of working going forward. Maybe offices will become virtual spaces and physical meetings rare occasions.

Supply Chains

The current crisis has exposed us to some crucial supply chain disruptions and if the situation persists, it is likely the operators and service companies will need to re-structure their supply chains. We will likely see shortening of the supply chains as the suppliers are brought closer to the home base or the base of operations. To do that, however, the industry needs to evaluate the risk of disruptions like COVID-19 to critical supplies in various stages of the value chain and then determine the most efficient way to mitigate the risk. Integrating operational data with supply chain and using analytical tools will not only help evaluate the bottle necks and their impact on operations, but also determine the ways to make the supply chain more efficient.

Preparing for the Long Road to Normal

We believe the course correction to restore the supply-demand balance will last longer than initially expected and well after the COVID-19 crisis has been addressed. While there are expectations the supply demand mismatch may likely be resolved by early 2021, we believe, a combination of the upcoming additional supply and the slower-than-expected return of demand will make it difficult for such a scenario to flourish. The oversupply situation is also unlikely to be overcome quickly by any reduction in production despite the US and other countries in OPEC and others initiating steps to that end.

Despite these measures, we do not have visibility for a better business environment before 2023. However, there are anumber of lessons to be learned from this unpresented event that will change the way the industry will operate in future. We believe the industry will emerge out of the crisis in a better shape with streamlined operations through integration of front and back office, adaptation of advanced analytics, and by using data to become more efficient. Hydrocarbons will still be essential to the world both as an energy source and technology drivers with a widespread economic and social impact. After all, we live in the age of hydrocarbons and much of our hopes for the future are built on the hydrocarbon molecule.

Sources:

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