As 2020 continues into Q3, CAPEX cuts are being implemented as plummeting revenues, low demand, and brimming oil storage tanks drive us towards a new reality within the industry.

Looking at public announcements from some of the major North American producers, we see a minimum $30bn impact but the IOCs are not the only ones suffering. With a financial crash in US shale, Canadian shutdowns, and the recent cuts in production for the OPEC and OPEC+ countries, the entire industry is undergoing radical change.

This crash is forcing companies to revisit all aspects of their business. Oil and Gas producers will be forced to reduce lifting costs to remain competitive, enhance operational efficiencies and leverage innovative, OPEX-based business models to drive success, and survival, in the post-COVID, “low for long” markets. It is now strategically imperative that operators fully embrace and deploy outcome-based digital solutions, such as machine learning, neural networks etc. and leverage alternative business model approaches to meet reduced CAPEX targets.

The current combination of unexpected market drivers, new technology and new business models are poised to disrupt, collapse and transform the future of the oilfield. Innovation will be a must for oil and gas companies to maintain a competitive edge. Outcome based, OPEX-based, digital technology solutions will rapidly transform the industry’s E&P efforts.

Given the previous statements it makes sense that new business models – that require minimal to zero CAPEX – will be needed to tackle both current and future challenges.

**Solutions-As-A-Service**

As an industry we are seeing a switch to “Solution-as-a-Service” business models. This supports the integration of physical products with their accompanying monitoring and “value-add” services. Individual transactions can now be omitted from the traditional sales equation and customers find themselves “subscribing” to a complete solution, and paying a recurring fee for the outcome-based services with next to zero CAPEX requirements.

An example of this would be the Siemens A14ESP application that provides connectivity and real time data collection from the wellsite to the cloud and subsequent software solution. The producer pays a recurring fee to identify operating anomalies (variation from expected performance behaviors that are determined by ML algorithms derived from historical and live data) that can, potentially, prevent or mitigate premature ESP system failure.

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Another example is Siemens Real-Time Production Optimization (RTPO). A single, full-field model of the oilfield is created for optimizing critical variables like production or costs, while accounting for all field constraints such as gas lift usage, energy, equipment throughput. The state-of-the-art optimization engine runs fast, proving new field setpoints at the push of a button. Since RTPO is a service, there is minimal impact on operating staff and no new field equipment is required.

The recurring OPEX fees for these solutions include all hardware and software for the duration of the contract – minimizing CAPEX requirements when compared to traditional solutions. However, the focus is on optimizing production and reducing environmental impact; as such our solutions are developed to be vendor agnostic and can utilize, and leverage, data from existing data sources and equipment – thereby supporting and increasing ROI on previous CAPEX investments. This is valuable to the producer as data is continually being collected on the health and status of the various components within the field systems, enabling the producer to work with Siemens and deliver BOE/Production to the market in the most economical and efficient manner.

This Solution-as-a-Service business model, with the accompanying solutions, enables operators to increase revenue streams while eliminating expensive CAPEX costs from the balance sheet. OPEX based models also show a faster ROI as CAPEX ROI is generally not realized until long after the project is complete.

Siemens is uniquely positioned to deliver Solution-as-a-Service OPEX based business models. Our financial strength, global reach and digital solutions portfolio enable us to shift financial risk from the operator to Siemens. Key benefits for operators are:

- Minimal impact on staff since the solution is provided as a service. No new software and equipment to learn and maintain.
- Solutions can expand and contract as operational needs dictate.
- Siemens is responsible for the uptime of the solution and making sure the SLAs are met.
- With annual subscription, financial forecasts are stable and predictable.

**Conclusion**

Both technology and business model innovation is essential for E&P companies that want to maintain their competitive edge - and stay relevant - in the CAPEX-starved, low price market of 2020. For Oil & Gas equipment/solution providers, the evolution from CAPEX and subscription/license models to zero CAPEX “Solutions-as-a-Service” is simply the next evolution in the way business is being done.