Operational excellence, disrupted

A new model has emerged for technology, media and entertainment, and telecommunications
We are seeing a new approach to operational excellence. What used to be a rigid, linear and expensive process is being replaced with a collaborative, iterative and highly automated approach. This approach is enabling technology, media and entertainment, and telco companies to be more agile, more customer-centric and to lower costs.

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A new model of operational excellence is emerging.

Driven by the explosion of data, it is replacing compartmentalized and rigid processes with a more collaborative, iterative model. This new approach to operational excellence (OE), which is being pioneered in digitized industries such as technology, media and entertainment, and telecommunications (TMT), is creating a more agile and customer-centric operating discipline that is a new source of competitive advantage.

Our research shows that TMT companies that adopt this model have significantly higher levels of satisfaction with their product quality (39% vs. 16%) and have much higher levels of confidence in managing today’s risks (48% vs. 11%) than those who have not.
Introduction

Operational excellence is one of the most powerful disciplines in the history of commerce. From its origins in the Model T era, OE has lowered costs, increased quality and become a long-standing source of competitive advantage for its best practitioners.

But like every industrial process and practice, OE is being thoroughly disrupted by new technologies. This transformation is most striking in highly digitized verticals such as technology, media and entertainment, and telecoms — but TMT companies’ experiences provide important lessons for all firms.

This is the first of a series of articles by EY on the emerging new model of OE. This will include a particular focus on OE in TMT industries.

As part of the research, EY conducted an in-depth survey of 150 senior OE practitioners from the TMT industries (for further information on the survey sample, see page 9). The analysis focuses on the state of development of OE in these industries, the delta between the old and the new, and finally, the lessons learned for all organizations that are undergoing operational transformation.
Operational excellence — defined as the structuring of processes for continuous improvement of products and services — has its origins in the early days of mass manufacturing. From the time and motion studies of Henry Ford, OE has evolved into sophisticated disciplines such as Six Sigma, lean thinking and OKAPI.

Yet all of these approaches, coming from the manufacturing world, have common characteristics:

• **Operational excellence is followed as a linear process:** Firms typically parallel their OE procedures with the flow of products through their firms — starting with the supply chain, through production, through quality assurance and then through distribution to the customer.

• **The process is compartmentalized:** Because of the need for deep focus, OE stages remain distinct from each other. A worker in one stage may have little knowledge about adjacent OE activities.

• **The systems are in-house:** Because of the need for close control, third parties such as suppliers, contractors and customers are typically adjacent to, but not within, the OE program.

• **Operational excellence processes are typically static:** In addition, OE activities are repetitive and highly specialized tasks. This creates a rigidity that limits flexibility in changing conditions.

• **Operational excellence can unintentionally slow down operations and stifle innovation:** The practical focus of OE is prevention of mistakes — not the best environment for creative thinking.

This is a tried-and-true model that is taught in business schools and implemented in factories. However, deep technology-driven forces are challenging this model and creating a new one in its place.
## The forces driving transformation of operational excellence

Our research found that there is a subset of TMT firms – about one in five – that have taken the lead in digitally driven operations. Based on the experience of these leaders, we propose five technology-based trends that are driving change in operational excellence, presented in the context of the TMT industries:

1. **Operational excellence is a discipline deeply grounded in metrics.** The explosion of data from virtually every part of the TMT value chain – from suppliers to customers – creates opportunities to predict, measure and improve performance on a continuous basis. For example, the embedding of sensors into telecom networks can monitor load and predict faults in future operations.

   **Leaders in OE place a significantly higher priority on embedding emerging technologies into operations – including supply chain, production, quality and risk management – than their counterparts (77% vs. 58%).**

2. **A further driver is the emergence of collaborative solutions.** A hallmark of classic OE was the compartmentalization of expertise. Now, experts are able to collaborate from any part of the process – combining expertise and across global boundaries. A prime example is the developer ecosystems being pioneered in the technology industry, which are now being extended into many verticals.

   **Over half (52%) of our surveyed firms are placing a high priority on developing more collaborative ecosystems with suppliers and customers.**

3. **There is a new agility demanded from operations.** The digitization of businesses and customers is forcing faster time-to-market, higher responsiveness and the ability to rapidly innovate. An example from the media and entertainment industry is how real-time customer response is reshaping the creation and distribution of content.

   **Almost two-thirds (65%) of TMT firms are looking to emerging technologies such as the Internet of Things or artificial intelligence to help them create customized products and more agile production.**

4. **Intelligent automation (IA) (sometimes termed “artificial intelligence”) is bringing an entirely new element of predictive capabilities to the OE process.** In the telecom industry, predictive analytics of customer preferences is being used to guide long-term capital investment in capacity and networks.

   **TMT leaders are significantly more likely (52% vs. 46%) to develop new technologies designed to understand and forecast customer preferences than their counterparts.**

5. **Finally, a new model of risk management is emerging in TMT industries.** On the one hand, embedded sensors and analytics can provide such close monitoring of risk factors – breakdowns, quality failures or shifts in customer tastes – that OE managers can better manage these risks to the enterprise. On the other, the digitization of processes is elevating cyber risk in the firm – making it a critical element in operational excellence.

   **Only 19% of TMT companies are highly satisfied with the management of risk in their companies – with cyber risk and product quality being their highest concerns.**
These trends are not just reshaping the classic OE model. In the world of technology, media and entertainment, and telecoms, a whole new model is emerging.

The TMT industries are creating a “virtuous circle” of OE. Instead of a linear progression of tasks and checkpoints, the new OE model is a circular flow that brings forth the deep competencies demanded by a digital world.

The overall structure of the new OE model is its circular, self-reinforcing nature. Suppliers receive more accurate forecasts from the production line. Production is informed of quality issues in real time. Customer feedback loops back around to the customer. The result is a tighter ecosystem, with a feedback-driven system of operational excellence.

A key change is the replacement of “command-and-control” supplier relationships with collaborative ecosystems — bringing the creative artists, cell-tower builders, software developers and other suppliers into the processes of OE. This intertwining of key participants can act as a form of quality assurance — reducing missed orders, accelerating creative content and ensuring that the product or service is aligned with the customers’ expectations.

An emerging competency within the new model is support of agile and innovative production. For example, a media and entertainment firm uses analytics to detect a significant shift in viewership. The collaborative supplier approach allows rapid development of creative ideas. New concepts can be iteratively tested and refined. A new innovation is in the market more quickly and at lower risk. This in turn enables a process of continuous improvement.

A central goal of OE is management of risk. The new circular model addresses these objectives directly. It can be used to provide early warnings on supplier and supply chain risk. It provides a corrective flow of information on systemic risk for faults and quality failures. It can provide predictive warnings on abrupt shifts in market risk.

A final element of the model is the engaged customer. Historical processes have often had a strong “hit-or-miss” element — and a larger percentage of disappointed customers. A continuing feedback loop from customers allows their input and preferences to be integrated into the creative and production stages. This, combined with the flexibility of digitized systems, is also supporting the customization of products and services in TMT industries.

Yet, as noted above, the digitized model can also increase the vulnerability to cyber risk. In our series of articles, we will explore how firms are instilling cybersecurity awareness into the operational excellence of their firms.
As highly digitized industries, TMT companies are migrating fastest to new models of operational excellence. What are some early recommendations for TMT firms making this transition?

- **Conduct an audit of your OE standards and practices.**
  Analyze the key steps and their alignment to increasing digitized processes. Are OE procedures keeping up with a digitized world? Are they slowing your production down? Are they making your operations more or less agile?

- **Review and consider a reset of your success metrics.**
  Digitized operations are generating a quantum leap in operating metrics. You have to manage this deluge of data. What is the data that you wish you had? How can you source it from your operations? How will you act on it once you have it?

- **Extend the operational excellence network upstream and downstream.**
  Using collaborative solutions, bring your suppliers into demand planning, production procedures and content creation. Which suppliers should you bring into your network? Which customers? How will you keep this extended network secure?

- **Consider integrating predictive analytics (artificial intelligence, or AI) into your operational excellence procedures.**
  AI solutions have come of age. Their use in predicting faults, outages and changes in the market can move your OE from a reactive correction to a proactive agent of change. How could AI improve your current operations? How could it reduce costs, predict faults and spot opportunities?

- **Use the full capabilities of digital operational excellence to manage risk.**
  What are your greatest operational risks? Create a risk audit for evolving business risk, supplier risk, operational failures, regulatory risk, customer changes and other forms of risk. Align that risk profile with the sensors, data and predictive analytics of the new model to use your operational excellence to manage the risks of the firm. How can you use data, analysis and the new model of operational excellence to reduce risk to the enterprise?
Survey demographics

1. **Responsible for or having strong knowledge of operational excellence in the company**

   - 150 respondents (100%)

2. **Titles of survey panel**

   - VP 34%
   - Department head 24%
   - CTO 11%
   - CIO 8%
   - CEO 6%
   - EVP 6%
   - CFO 4%
   - Other C-level 4%
   - IT 42%
   - Operations 10%
   - Marketing 14%
   - Finance 13%
   - Sales 5%
   - Procurement 1%
   - Supply chain 1%

3. **Corporate function**

   - IT 42%
   - General management 14%
   - Marketing 14%
   - Finance 13%
   - Operations 10%
   - Sales 5%
   - Procurement 1%
   - Supply chain 1%

4. **Company size (revenue)**

   - $1 billion to < $3 billion 28%
   - $3 billion to < $5 billion 18%
   - $5 billion to < $10 billion 15%
   - > $10 billion 8%
   - $500 million to < $1 billion 31%
   - $1 billion to < $3 billion 28%
   - $5 billion to < $10 billion 15%
   - $10 billion to 1450 respondents (100%)

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**Note:** There were no respondents <25 yrs and >65 yrs in age.

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Survey demographics

5. Geographic representation

- Australia 12%
- South Africa 13%
- Singapore 13%
- India 13%
- Canada 13%
- US 20%
- UK 16%

6. Level of digitization

- Not at all digitized 1%
- Minor digitization 6%
- Significant digitization 38%
- Fully digitized 12%
- Highly digitized 44%

Note: percentages may not total to 100% because of rounding.

7. Age demographic

- 55 yrs to <64 yrs 6%
- 45 yrs to <55 yrs 21%
- 35 yrs to <45 yrs 40%
- 25 yrs to <35 yrs 33%

Note: there were no respondents <25 yrs and >65 yrs in age.

8. Industry representation

- Technology 32%
- Telecoms 33%
- Media & Entertainment 35%

Note: there were no respondents <25 yrs and >65 yrs in age.
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Digital technology innovation is continuously disrupting organizations and converging industries, driving content distributors into content production, transforming telecommunications providers into content distributors and turning tech companies in all directions. Thus, competition is escalating, and digitally empowered customers are demanding more than ever.

Our global Technology, Media & Entertainment and Telecommunications (TMT) services can help you revamp your organization for the future and enhance customer experiences across all channels. Our network of more than 38,000 TMT professionals helps you nurture growth by bolstering agility, operational excellence and enterprise trust. Our broad advisory, assurance, tax and transaction services help you thrive in this rapidly changing environment – while preparing for disruptions yet to come. Find out more at ey.com/tmt.

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EYG no. 010218-18Gbl
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