



Building a better  
working world

# Advanced Manufacturing Quarterly

Analyst themes from  
earnings calls

**August 2021**

Advanced manufacturing (AM) companies are rethinking their sourcing strategies and operating models, amid major disruptions in their value chain. While demand in key regions and end markets continue to recover, companies are not able to fulfill customer orders due to raw material and labor shortages, commodity inflation, and transportation congestion. Companies are striving to become more resilient via accelerated digitalization and are looking for new avenues of growth by exploring emerging areas of technology- and sustainability-driven offerings. Hence, the sector is witnessing huge investments in emerging areas, such as electric mobility, quantum computing, decarbonization, hydrogen economy and healthy buildings.

Follow us on Twitter  
[@EYManufacturing](https://twitter.com/EYManufacturing)

Manufacturers are embedding digital and sustainability in their business models to strengthen resilience amid supply chain and other disruptions

Welcome to the quarterly review of the key themes discussed by leaders of 31 AM sector companies (including those from the aerospace and defense (A&D), industrial products (IP), and chemical subsectors) during public earnings calls with analysts in July and August 2021. This edition tracks the movement of the top five market forces and company responses from quarter to quarter to provide a perspective on shifts in the AM landscape.

**Market forces and company responses that stood out include the following:**

- ▶ **Value chain breakdown is emerging as a significant market force.** Supply chain constraints, primarily semiconductors and resins shortages, coupled with commodity inflation and logistics bottlenecks, are disrupting production schedules and hampering customer relationships. Multiple companies are enduring financial losses in the range of \$100 million to \$200 million each for 2Q21. As these disruptions are expected to endure through 2021, many peers are collaborating with customers and distributors for better visibility, automating production to increase factory utilization, contracting alternative suppliers, implementing price hedging and signing long-term contracts.
- ▶ **Change in financial outlook is emerging as the top company response.** Despite disruptions in the supply chain and revenue impact in the quarter, most companies are highly confident of the recovery in end markets and are providing robust positive outlooks for the remainder of 2021. Ongoing vaccination programs, higher uptake of digital services, and partnerships and acquisitions to capture emerging growth areas, such as electric vehicles, quantum computing, autonomous mobility and healthy buildings, are strengthening revenue growth plans.

**Jerry Gootee**  
EY Global Advanced Manufacturing Sector Leader

## Top five market forces

2Q21		
↔	1.	Demand patterns
New	2.	Investors
↔	3.	Sustainability initiatives
↓	4.	Public health
New	5.	Value chain breakdown

1Q21	
1.	Demand patterns
2.	Public health
3.	Sustainability initiatives
4.	Intensity of competitive rivalry
5.	Consumption behavior

### 1 ↔ Demand patterns

Trends in key customer segments and regions impacting demand for products and services

- ▶ Key end markets continue to recover and companies expect year-over-year (YoY) double-digit growth across warehousing, residential and commercial construction, mobility, consumer durables, industrials, and home and personal care.
- ▶ Almost all regions are witnessing robust growth, with Asia (primarily China) and North America growing stronger than Europe (UK, Germany), Latin America and the Middle East, due to opening borders, supported by ongoing vaccination programs.
- ▶ Demand in commercial aerospace remained low due to subdued international travel, with recovery to 2019 levels not expected before 2024.

### 3 ↔ Sustainability initiatives

Sustainable product and operations, decarbonization and the circular economy

- ▶ Stricter sustainability reporting guidelines, such as the EU Corporate Sustainability Reporting Directive and the U.S. Securities and Exchange Commission's public consultation on climate-related disclosures, coupled with an urgency to meet decarbonization targets, are making manufacturers position sustainability as a centerpiece in their growth strategies and operating models.
- ▶ Peers are also realizing the tremendous value that a sustainable enterprise can generate, via new service-driven revenue opportunities, by establishing markets for new products and becoming a responsible enterprise.
- ▶ Many are winning multimillion-dollar contracts, primarily for sustainable products and end markets, including electric vehicles, renewable energy, green buildings, energy-efficient engines, recyclable packaging and green refrigerants.

### 2 New Investors

Investor expectations for improved financial performance

- ▶ Improved cash positions are enabling manufacturers to focus on share repurchases, dividends and deleveraging, and even to pursue strategic opportunities.
- ▶ Decentralization efforts, LEAN implementation, targeted M&As and divestments are some top strategies that peers are deploying to maximize investor returns.
- ▶ Peers are focusing on maintaining strong balance sheets and driving margins via increasing share of high-margin services business, and strengthening of marketing teams and customer relationships.

### 4 ↓ Public health

COVID-19 pandemic

- ▶ The recent surge in COVID-19 cases due to the emergence of the Delta variant is again creating uncertainty; however, ongoing strength in many end markets supports robust financial outlooks of peers.
- ▶ Companies are planning for recovery by closely monitoring the rollout of vaccines in key regions, which is directly correlated with the recovery in demand. Many are hiring additional employees and investing in resources to increase production.
- ▶ Many peers strive to achieve operational excellence via cost reductions and restructuring to navigate the ongoing COVID-19 impact, including inflationary and supply chain challenges.



As companies set carbon-neutral or carbon-negative goals, supply chains are a natural target for reduced emissions, particularly through optimized manufacturing and vehicle electrification in logistics. Planning effectively for tomorrow — or 2035 — also means taking steps forward today, and while a net-zero supply chain isn't easy to achieve, know that smarter use of resources can have a big impact both on your bottom line and the health of the planet.

Glenn A. Steinberg, EY Global Supply Chain and Operations Leader

# 5 **New** Value chain breakdown

New supply chain constraints and supplier failure disrupting production schedule

- ▶ Raw material shortages and transportation bottlenecks, especially semiconductors and resins shortages, and longer lead times due to route congestions, is adversely impacting production plans, working capital, product pricing and customer relationships.
- ▶ Peers are enduring significant financial head winds, with sales of at least three large manufacturers impacted in the range of \$100 million to \$200 million each for 2Q21.
- ▶ As material shortages and supply chain issues are expected to endure through 2021, many peers are implementing mitigation strategies, such as collaborating with customers and distributors for better visibility, automating production to increase utilization, contracting alternative suppliers, and implementing price hedging and long-term contracts.

“

While the value chain challenges and the complexity of global operations are enormous, emerging technologies have also redefined what's possible: delivering visibility where it has never existed before, bringing order to data that spans the globe, and replacing gut instincts and guesswork with analytics-driven insights

**Sachin Lulla, EY Advanced Manufacturing & Mobility, Global Digital Strategy & Transformation Leader**



## Top five company responses

2Q21		
↑	1.	Change in financial outlook
↔	2.	Business reorganization or restructuring
↓	3.	Competitive positioning
↔	4.	Product design and innovation
↔	5.	Working capital and cash flow management

1Q21		
	1.	Competitive positioning
	2.	Business reorganization or restructuring
	3.	Change in financial outlook
	4.	Product design and innovation
	5.	Working capital and cash flow management

### 1 **↑** Change in financial outlook

Changing forecasts for revenues, margins or earnings per share

- ▶ Most companies are providing robust positive outlooks and expecting sales to grow in double digits for the remainder of 2021, driven by recovery in end markets and higher uptake of digital services.
- ▶ The return of variable costs, which were absent a few quarters ago due to the COVID-19 impact, coupled with navigating current capacity constraints and supply disruptions, is resulting in margin pressures for a few peers.
- ▶ Many are providing robust top-line growth plans driven by partnerships and acquisitions within and outside the sector (primarily technology) to capture market shares in emerging growth areas, such as electric vehicles, quantum computing, autonomous mobility and healthy buildings.

### 3 **↓** Competitive positioning

Market share, new division and brand launches, pricing strategy, and speed to market

- ▶ AM peers are closely monitoring and evaluating their product pricing strategy to account for the rising costs. Many are increasing product prices to maintain margins.

### 2 **↔** Business reorganization or restructuring

Transforming company structures to meet strategic goals and market demands

- ▶ Restructuring plans to improve labor productivity, digitize supply chain and standardize practices, including IT systems across the organization, are improving profit margins as much as 100% YoY.
- ▶ Several companies are simplifying organization structures by divesting non-core businesses and continuing to decentralize business units to improve accountability and ownership.
- ▶ Peers are also focusing on supply chain reshoring and manufacturing plant optimization with many consolidating their manufacturing sites in response to demand fluctuations.
- ▶ Many peers are setting up dedicated teams for negotiating with suppliers and using digital tools, such as predictive analytics, to minimize pricing disruptions.
- ▶ Industrial peers partnered with regional players to move their product quickly into local markets.
- ▶ One of the aerospace majors tweaked its traditional business model and started selling flight hours, along with traditional aircraft.

## 4 Product design and innovation

New products and services influenced by sustainability and digitalization of offerings

- ▶ Capitalizing on the trends of sustainability and digital transformation, peers are launching high-margin IIoT-driven solutions for HVAC systems, remote monitoring, smart buildings and elevators, helping them increase customer connectivity and improve margins.
- ▶ Companies are developing more energy-efficient, sustainable and connected products, such as net-zero connected buildings, recycled feedstocks, aero engines with sustainable fuels, hydrogen propulsion systems and electric aircraft, to help customers meet decarbonization targets.
- ▶ Many peers are announcing products and detailing strategies to capture a greater share of new multibillion dollar opportunities, such as \$250 billion in infrastructure decarbonization, \$10 billion to \$15 billion in healthy buildings, \$120 billion in urban air mobility, and \$6 billion in quantum computing technologies, with expected value generation of over \$450 billion across sectors.

## 5 Working capital and cash flow management

Changes observed from the prior quarter

- ▶ For most peers, cash flow and an upward revision of future outlook continues to improve, due to strong order books.
- ▶ Given the current constrained supply chain environment, many peers are routing cash to working capital to strike a balance between customer receivables, distributor invoices and inventory levels, putting some pressure on margins.
- ▶ Several aerospace OEMs are paying accelerated payments to their distressed suppliers to protect supply base, and guarantee timely deliveries of their major orders and backlog.



A new growth cycle is on the way and innovative companies are already leaving behind the traditional drivers of scope, scale and efficiency. Innovating at scale along this new growth trajectory requires companies to take a future-back approach to strategic planning, to see data as an asset worth investing in, and to move toward resilient supply networks that are data driven and enable hyper personalization.

Michael Kanazawa, EY Global Innovation Realized Leader

## Companies included in the analysis

The identification of the top market forces and company responses is based solely on an examination of earnings calls held in July and August 2021.

- ▶ ABB Ltd.
- ▶ Airbus SE
- ▶ Albemarle Corporation
- ▶ BASF SE
- ▶ Boeing Company
- ▶ Bombardier Inc.
- ▶ Carrier Global Corporation
- ▶ Danaher Corporation
- ▶ Dow Inc.
- ▶ Dupont De Nemours, Inc.
- ▶ Eaton Corporation plc
- ▶ Ecolab Inc.
- ▶ Flowserve Corporation
- ▶ FMC Corporation
- ▶ General Electric Company
- ▶ Honeywell International, Inc.
- ▶ International Flavors & Fragrances, Inc.
- ▶ International Paper Company
- ▶ Johnson Controls International plc
- ▶ Linde plc
- ▶ Lockheed Martin Corporation
- ▶ LyondellBasell Industries NV
- ▶ Mitsubishi Chemical Holdings Corporation
- ▶ Northrop Grumman Corporation
- ▶ Olin Corporation
- ▶ Otis Worldwide Corporation
- ▶ PPG Industries, Inc.
- ▶ Raytheon Technologies Corporation
- ▶ Siemens AG
- ▶ Textron Inc.
- ▶ The 3M Company

## EY contacts



**Randy Miller**  
EY Global Advanced  
Manufacturing & Mobility  
Industry Leader  
+1 313 628 8642  
randall.miller@ey.com



**Jerry Gootee**  
EY Global Advanced  
Manufacturing Sector  
Leader  
+1 216 583 8647  
jerome.gootee@ey.com



**Kris Ringland**  
EY Global Advanced  
Manufacturing &  
Mobility Strategy and  
Transactions Leader  
+46 8 52059278  
kristin.ringland@se.ey.com



**Dr.-Ing. Frank Jenner**  
EY Global Chemicals  
& Advanced Materials  
Industry Leader and  
Global Advanced  
Manufacturing & Mobility  
Supply Chain Leader  
+49 621 4208 18000  
frank.jenner@de.ey.com

## EY | Building a better working world

EY exists to build a better working world, helping create long-term value for clients, people and society and build trust in the capital markets.

Enabled by data and technology, diverse EY teams in over 150 countries provide trust through assurance and help clients grow, transform and operate.

Working across assurance, consulting, law, strategy, tax and transactions, EY teams ask better questions to find new answers for the complex issues facing our world today.

EY refers to the global organization, and may refer to one or more, of the member firms of Ernst & Young Global Limited, each of which is a separate legal entity. Ernst & Young Global Limited, a UK company limited by guarantee, does not provide services to clients. Information about how EY collects and uses personal data and a description of the rights individuals have under data protection legislation are available via [ey.com/privacy](https://ey.com/privacy). EY member firms do not practice law where prohibited by local laws. For more information about our organization, please visit [ey.com](https://ey.com).

© 2021 EYGM Limited.  
All Rights Reserved.

EYG no. 007374-21Gbl  
BMC Agency  
GA 14244511  
ED None

This material has been prepared for general informational purposes only and is not intended to be relied upon as accounting, tax or other professional advice. Please refer to your advisors for specific advice.

[ey.com/mfg](https://ey.com/mfg)