



NRV Tech and Manufacturing Industries Show Strength and Resiliency Two Years Into COVID-19 Pandemic

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NEW RIVER VALLEY, VA – In May 2022, Onward New River Valley partnered with the New River Valley Regional Commission, through a grant from the U.S. Economic Development Administration CARES Act, to conduct surveys of technology and manufacturing companies in Virginia’s New River Valley. Onward New River Valley engaged the Virginia Tech Center for Economic and Community Engagement for research assistance with the surveys. These surveys were a follow-up to [surveys originally conducted in September 2020](#). The goal of both the original and follow-up surveys were to better understand how the COVID-19 pandemic affected technology and manufacturing businesses throughout the region as well as to gain knowledge about common challenges that these companies are facing.

Survey responses were collected from both the tech and manufacturing sectors during May 2022. Each sector was given a two-week response window. The survey was sent to 33 tech companies and 37 manufacturing companies throughout the New River Valley (NRV). 55% of tech companies who were sent the survey responded while 41% of manufacturing companies responded.

The survey results revealed insights about the current state of the NRV’s manufacturing and tech sectors when compared to before the COVID-19 pandemic as well as to the mid-pandemic survey conducted in September 2020. A synopsis of these insights for both sectors, including information about the operating status, employment trends, remote work trends, and current industry challenges, is included below.

Operating Status

The data from the original and follow-up surveys show that the current operating status of both tech and manufacturing companies in the NRV have held steady or improved over the past two years.

Manufacturers in the NRV are operating at strong levels and have successfully weathered the effects of the COVID-19 pandemic. In the survey conducted in September 2020, over three-fourths (76%) of respondents reported operating at or above pre-pandemic capacity. The results of the follow-up survey in 2022 indicated that all responding manufacturers were operating either at (92%) or above (8%) pre-pandemic capacity. No respondents reported operating below pre-pandemic capacity. This shows that manufacturers throughout the region

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are operating at normal levels when compared to their operations prior to COVID-19 and have improved their operations compared to the height of the pandemic in 2020.

Tech companies in the NRV are operating at stable levels compared to before the pandemic. The original survey results from 2020 reported that the vast majority (88%) of tech companies indicated their business had grown (38%) or stayed about the same (50%) when compared to pre-pandemic. For the 2022 follow-up survey, half of respondents (50%) reported that their firms have grown relative to pre-pandemic levels while nearly one-third (28%) reported maintaining their size. Thus, a larger percentage of tech company respondents reported that their businesses were growing in 2022 than did in 2020. Overall, the percentages of NRV tech companies that report either remaining steady or growing compared to pre-pandemic levels has remained relatively stable over the past two years.

Employment

The number of employees at NRV tech and manufacturing companies has only increased in the nearly two years since the first survey was conducted in September 2020. The original survey results revealed that approximately two-thirds (63%) of tech company respondents said that their number of employees had stayed the same since pre-pandemic. A similar amount (62%) of manufacturers said the numbers of employees remained the same or increased at that time.

In contrast, the follow-up survey in 2022 showed that the large majority (83%) of tech company respondents and three-quarters (75%) of manufacturing survey respondents reported maintaining or increasing their number of employees when compared to pre-pandemic.

While the original surveys showed that employment in the tech and manufacturing industries across the NRV remained mostly stable in the middle of the pandemic when compared to pre-pandemic levels, the follow-up survey results show an increase in the percentage of tech and manufacturing companies across the region who are reporting employment numbers similar to or greater than before the pandemic. This shift could indicate that companies across the NRV are beginning to rehire positions eliminated when the pandemic began.

The number of the open jobs in the New River Valley is continuing to grow. In the 2022 follow-up survey, the large majority (82%) of manufacturing respondents and over half (56%) of tech company respondents reported having unfilled job openings in the NRV. This is a notable increase from the 2020 survey where only 62% of manufacturing respondents and 38% of IT/tech respondents reported having unfilled openings. The increase could be attributed to an increase in hiring due to companies' growth across the region, the current U.S. labor market that is making it harder to fill open positions, or a combination of both factors.

Remote Work Trends

Remote work trends for tech and manufacturing companies in the NRV can be described as the tale of two sectors. While the data from the 2022 follow-up survey shows a continuation of

remote work for tech companies, it also shows that manufacturing companies across the region have returned to mostly in-person work.

In the original industry surveys conducted in September 2020, two-thirds (67%) of tech company respondents reported that more than 81% of their employees were working remotely at the time. In the 2022 follow-up surveys, only one-fourth (24%) of respondents reported that over 81% of their employees would be working remotely currently and in the future. However, nearly half (41%) of the follow-up survey respondents reported that 61-80% of their workforce would be working remotely in 2022 and beyond. Over three-quarters (78%) of 2022 tech survey respondents said that remote work would continue to be very relevant to their firms' operations in the future. Overall, this shows that tech companies in the region still are utilizing remote work to a large extent and will do so moving forward, but that the percentage of employees working remotely in 2022 has decreased when compared to 2020. This could indicate an increase in hybrid work options for NRV tech companies.

In contrast, NRV manufacturing companies have relied less on a remote workforce throughout the pandemic compared to tech companies and continue to do so in 2022. This difference can be attributed to the nature of manufacturing businesses and the need for in-person production operations. In September 2020, nearly two-thirds (62%) of manufacturing survey respondents reported having more than 5% of their workforce working remotely, but almost none (5%) of the respondents reported that percentage of remote workers prior to the pandemic. However, the increase in remote work in the height of the pandemic allowed manufacturers to properly address physical distancing guidelines and health and safety concerns for their employees.

The number of manufacturing survey respondents reporting remote work for their employees decreased in the 2022 follow-up survey. In the current survey, only one-third (33%) of manufacturing respondents anticipated that they would have more than 5% of their workforce working remotely in 2022 and beyond. This shows that remote work for NRV manufacturers has decreased when compared to the height of the pandemic and that manufacturers anticipate remote work will be less relevant to their businesses in the future than in 2020.

Current Challenges

While manufacturing and tech companies in the NRV have weathered the COVID-19 pandemic with strength and stability, both industries are also facing current challenges that were highlighted in the survey results.

Issues surrounding the supply chain have come to the forefront as some of the most pressing challenges NRV manufacturers are currently facing. In the 2022 follow-up survey, nearly all (91%) manufacturing survey respondents noted a decrease in availability of inputs and raw materials when compared to pre-pandemic. These decreases in availability corresponded to higher costs and expenses for manufacturing companies. Three-fourths (75%) of respondents noted that there was either a slight or substantial increase in the cost of those inputs and raw materials and the same percentage noted an increase in supplier lead times when compared to

before the pandemic. Additionally, nearly all respondents noted a slight or substantial increase in freight costs (91%) and overall expenses (92%) for their businesses.

The challenges currently faced by NRV tech companies center around the changes associated with remote work becoming a long-term solution for these businesses. In the 2022 survey, the most frequently reported challenge among tech company respondents was employee morale and company culture. With the increase in remote and hybrid work over the past two years, it makes sense that companies may find it challenging to establish and nurture a positive company culture for their employees. Another challenge facing NRV tech companies is the reduced need for physical office space because of increased remote and hybrid work options. Two-thirds (67%) of tech company respondents reported that their company's needs for physical space have changed because of the pandemic. Many of those respondents noted that they needed less office space than before the pandemic due to the increase in remote work.

Overall Industry Outlook

In both the original and follow-up surveys, manufacturing and tech companies responded to a question about their overall business outlook in the NRV over the next 6-12 months. In 2020, the vast majority (91%) of manufacturing respondents reported a steady or positive outlook over the upcoming year. In contrast, a slightly smaller number (81%) of manufacturing respondents reported a steady or positive outlook for the same time frame in the 2022 follow-up survey. While the survey was not able to identify a clear reason why manufacturers have a slightly less positive outlook now than they did in September 2020, the supply chain issues highlighted above may be a contributing factor.

Meanwhile, tech company respondents shared a very similar outlook for their businesses in both the 2020 and 2022 surveys. In 2020, the vast majority (88%) of respondents reported a steady outlook for their businesses in the NRV over the next 6-12 months. This closely mirrors the 89% of tech company respondents reporting a steady or positive outlook over the next year in the 2022 follow-up surveys.

The results from the original and follow-up surveys conducted by Onward New River Valley and the Virginia Tech Center for Economic and Community Engagement show that both the tech and manufacturing industries in the region have shown resilience throughout the COVID-19 pandemic. NRV manufacturers and tech companies continue to be successful in Virginia's New River Valley and are strong contributors to the region's economy.

Learn more about the follow-up survey and read a final report of the results from the Virginia Tech Center for Economic and Community Engagement below.

Visit the Onward NRV website to learn more about the original [information technology](#) and [manufacturing](#) Industry Competitiveness Surveys conducted in September 2020.

Advanced Manufacturing and IT in the New River Valley: Impacts of COVID-19 and Supply Chain Shocks



PREPARED BY THE VIRGINIA TECH CENTER FOR ECONOMIC AND COMMUNITY ENGAGEMENT

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Introduction/Executive Summary

In 2020, Onward NRV partnered with the Virginia Tech Center for Economic and Community Engagement (CECE) to determine how Advanced Manufacturing and IT firms in the region were affected by COVID-19 and how these firms felt about their prognosis regarding the next year. To accomplish this, CECE developed surveys designed to generate insight into how businesses were faring. There were 21 manufacturing survey responses and 24 information technology survey responses. CECE also conducted interviews with representatives from two Advanced Manufacturing and two IT firms to generate additional insight.

At that time, close to two-thirds of Advanced Manufacturing and IT firms expected to retain their employees. Sixty-two percent of manufacturers had unfilled production worker and engineer positions, and thirty-eight percent of tech companies needed software engineers, account executives, and production schedulers. Businesses in both sectors generally maintained positive outlooks for the following year. The most significant concern among companies at the end of 2020 was the health and safety of employees.

In 2022, two years after the initial survey, CECE followed up with Advanced Manufacturing and IT firms to see how these businesses were faring. Follow-up survey responses suggest that regional Advanced Manufacturing and IT companies have performed strongly since the onset of the pandemic. Relative to pre-pandemic levels, most firms—83% of technology firms and 75% of manufacturing firms — report maintaining or increasing the number of employees at their firm; payrolls have held steady or increased for approximately 90% of firms in both sectors, and firms report similar or increased revenues. Manufacturing and technology firms correspondingly report positive outlooks. Onward NRV and CECE also conducted semi-structured interviews with firms from each sector to shed additional light on business prognoses and experiences doing business in the New River Valley. Findings from interviews paralleled those expressed in surveys.

Survey and Interview Sampling

The Manufacturing survey received 15 responses. There were no reported respondents from Floyd County, Virginia though all other locations were represented.

City of Radford	2
Floyd County	0
Giles County	2
Montgomery County	7
Pulaski County	4
Total	15

Manufacturing survey respondents reported engaging in production of a variety of products, as detailed below:

Product Segments	Response Counts
Automotive	4

Aviation/Aerospace	2
Chemicals	3
Construction Products	1
Defense	3
Electronics	2
Energy	0
Food & Beverage	2
Heavy Equipment	2
Machinery	1
Metal Fabrication	1
Packaging	1
Pharmaceutical/ Medical Devices	1
Pipes/Tanks	0
Plastics	1
Sports/ Recreation	0
Textiles	2
Transportation (railways, road equipment, etc.)	1
Wind/Renewables / Energy Storage	1
Wood/ Paper Products	1
Other	1

The IT survey received 18 responses. Respondents reported universally being from Montgomery County, Virginia.

Table 3: Regional Site Location of IT Survey Respondents	
City of Radford	0
Floyd County	0
Giles County	0
Montgomery County	18
Pulaski County	0
Total	18

IT survey respondents reported engaging in a variety of product segments, as detailed below:

Table 4: Product Segments for IT Firms	
Product Segments	Response Counts
Business to Business (B2B)	13
Business to Consumer (B2C)	2
Hardware/equipment	4
Cloud computing	6
Managed services	6

Cybersecurity	6
eCommerce	4
Proprietary Software	7
Custom web/app development	8
Analytics & Business intelligence	4
Digital marketing/advertising	2
Other	3

CECE also conducted semi-structured interviews with four Manufacturing firms and three IT firms, to generate additional insight into how businesses were doing in the NRV. Specifics regarding these firms are withheld in the interest of confidentiality. We present the findings from these surveys and interviews below.

Workforce and Employment

Companies in both sectors intend to remain in a holding pattern or to grow, regarding hiring. The rise of remote work has reduced some barriers to finding the right talent, particularly for IT firms, and manufacturing firms mention strong abilities to fill the positions they need from local talent. Both sectors source talent from nearby educational institutions, such as Virginia Tech, Radford University, and the region’s community college system. Companies in both sectors note the region’s amenities and quality of life as major attractions for recruiting and retention. However, tight housing markets are a threat to talent attraction.

Remote Work

Survey responses suggest the rise of remote work has had the greatest impact on IT firms’ operations and that supply chain issues have had the greatest impact on manufacturing firms’ operations. IT firms reported substantial work-from-home activity and predict that remote work will continue, if not increase into the future. Correspondingly, some technology firms report that their needs for commercial spaces have declined.

Interviews revealed the rise of remote work to be the prevailing theme among IT firms in the New River Valley. Those interviewed noted a heavy shift towards remote work during the pandemic and an intent to continue hybrid and remote operations moving forward, which paralleled survey findings. IT firms in the region already had experience with remotely engaging clients; this smoothed the transition to remote operations in some instances. IT firms noted that remote work enables them to provide services at prices more competitive than those available near clients in larger cities.

Advanced Manufacturing interviewees noted that their firms were less able to implement remote work. Though some employees-namely those in administrative roles- were able to work from home during the pandemic, advanced manufacturing plants required in-person work to continue operations. Advanced Manufacturing firms facilitated safe operations through a variety of practices, such as coordinating vaccination efforts, compartmentalizing workers into teams to minimize cross-exposure, and implementing extensive exposure-prevention and cleaning procedures throughout their facilities. Manufacturing firms report no change in need for physical space since the onset of the pandemic.

Business Outlook

Business and Worker Resilience and high morale are recurring themes in both sectors. Companies—and their employees— have responded well to challenges such as maintaining operations through pandemic-related staffing challenges and maintaining productivity through remote work. Companies have implemented ways for employees to truly disconnect from work and have provided employees with options to secure materials to facilitate work-from-home.

Overall, the prognosis for manufacturing and technology firms in the NRV is strong. Firms in both sectors have been resilient during the past two years of economic volatility and should continue to be major contributors to the NRV economy.

Respondents were asked about their overall business outlook for the next 6-12 months in the NRV. IT and Manufacturing respondents reported generally positive prognoses.

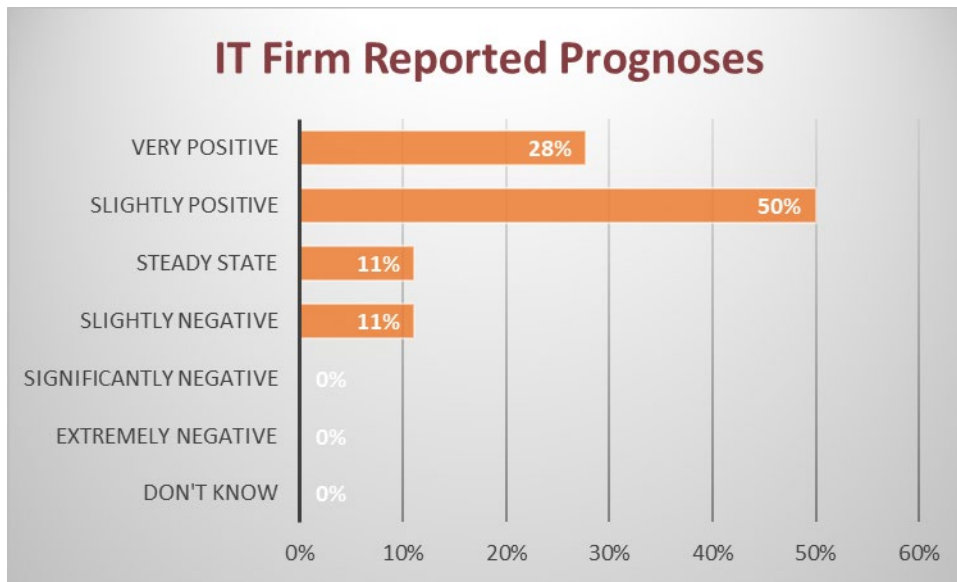
The figure below details Manufacturing respondents' sentiments regarding continued business in the NRV:

Figure 1: Reported Prognoses of Manufacturing Firms in the NRV



The figure below details IT respondents' sentiments regarding continued business in the NRV:

Figure 2: Reported Prognoses of IT Firms in the NRV



The Impact of COVID-19

Approximately one-fifth of IT firms reported having shrunk relative to pre-pandemic levels and half report having grown relative to pre-pandemic levels; the rest report maintaining their size.

Manufacturing firms report similarly strong activity, with approximately nine-tenths of firms operating at pre-pandemic capacity and the remainder operating above pre-pandemic capacity.

Firms were asked to describe various business considerations, relative to pre-Pandemic levels and relative to mid-Pandemic levels.

Manufacturing Firms noted decreases in availability of inputs and raw materials, which corresponded with higher costs of inputs, increased supplier lead times, increased freight costs, and increased expenses. Otherwise, Manufacturing firms generally noted no change to slight-increases in the following:

- Hours of operation
- Numbers of Employees
- Payroll (\$)
- Sales prices
- Average order size
- Sales/Pipeline Demand
- Inventory Levels
- Production Levels
- Number of products offered
- Overall Revenues

Responses were similar when Manufacturing firms were asked to compare current conditions to mid-pandemic levels.

Almost universally, changes to IT firms' business activity were slight: they report no impact on hours of operation, and slight increases in the following:

- Hours of operation
- Number of Employees
- Payroll
- Prices
- Average Deal Sizes
- Sales Pipelines/demand
- Number of Products and Services Offered
- Overall Expenses
- Overall Revenue.

Responses were similar when IT firms were asked to compare current conditions to mid-pandemic levels.

Business Concerns

Firms were asked what challenges they currently face. Responses suggest that Manufacturing and IT firms have different concerns, presented below:

Manufacturing firms heavily discussed supply chain difficulties and recruiting and retention difficulties. These issues predominated responses. Manufacturing firms elaborated on these issues and noted the following specific difficulties:

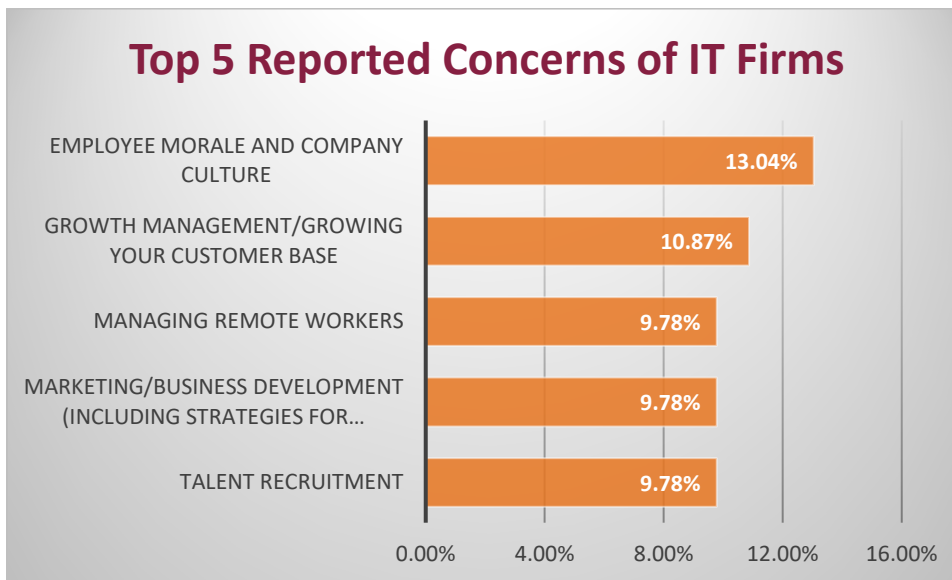
Table 5: Major Difficulties of Manufacturing Firms

Major Difficulties of Manufacturing Firms
Difficulties with transportation along the supply chain
Sourcing materials from overseas
Having few applicants for entry-level positions in the region

In general, though, supply chain issues were the main concerns of Manufacturing Firms. Interviews suggested that supply chain issues were the biggest concerns of Advanced Manufacturing firms. Advanced Manufacturing firms had difficulty sourcing select materials from suppliers during the pandemic and in the post-pandemic, supply-chain-constrained economy. Firms responded by certifying additional suppliers, re-engineering products to reduce reliance on tough-to-acquire products, and renegotiating contracts with suppliers. Advanced Manufacturing Firms also noted difficulty with transportation logistics, including finding trucks to move products, and noted that continued investment into improving road systems would be helpful for firms in their sector.

Less affected by supply chain issues, IT firms were asked to choose their main concerns they face when doing business. They report the following concerns:

Figure 3: Top Concerns of IT Firms in the NRV



Hiring

Respondents in both Manufacturing and in IT anticipate modest increases in employment in both six months and a year.

Over 80% of manufacturing firms report having unfilled positions in the NRV; select titles of unfilled positions are as follows:

- Technicians
- Engineers
- Machine Operators
- IT personnel
- Packing Specialists

Approximately 56% of IT firms report having unfilled positions in the NRV; select titles of unfilled positions are as follows:

- Developers
- Administrative personnel
- Engineers
- Account and Marketing Managers
- Business Development Managers

Firms in both industries were asked their view on how diversity in the New River Valley affects hiring and other activity. Responses from IT firms suggested that the area may lack diversity, but that this generally does not impact hiring and talent searches. Remote work, for instance, is one factor mitigating the impact of diversity constraints. Manufacturing firms report a lack of diversity in the region, but are actively working to recruit a diverse workforce. Present lack of diversity complicates recruitment, overall, for some firms. Others report that diversity-related issues do not hinder their ability to recruit those they need.