NRV Tech Companies Shift to Remote Work During Pandemic, Sector Outlook Strong

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NEW RIVER VALLEY, VA - In September 2020, Onward New River Valley conducted a survey of technology companies in Virginia's New River Valley. The goal of the Industry Competitiveness Survey was to better understand how local information technology companies were operating and adapting in the wake of COVID-19. The survey was intended to identify common challenges among local companies and expose best practices that would support the overall competitiveness and continued growth of the local tech sector.

Survey responses were collected during a two-week period in September 2020. The survey was sent to 28 information technology companies in Virginia's New River Valley (NRV) with 71% responding. The survey results revealed several insights about the tech sector in the region; these insights are described below.

Operating Status
Overall, tech companies have remained mostly stable in the wake of the COVID-19 pandemic. When respondents were asked to evaluate the current operating status of their companies, only 12% reported that their business had shrunk since the pandemic began. The vast majority (88%) indicated that their business had stayed about the same (50%) or even grown (38%).

Most (58%) respondents reported stable or increasing revenue compared to pre-pandemic, but over half (55%) of respondents reported a decrease in their sales pipeline. Consequently, it's no surprise that a majority (63%) of respondents ranked marketing as one of their current top three concerns.

Several respondents reported that lead generation is a current challenge due to the pandemic. One person wrote, "I feel that there is some lack of quality in our sales pipeline now that we've shifted all of our client meetings remote," while another stated, "finding new ways to engage prospective clients without tradeshows and travel is a top priority." Marketing and selling in a remote environment are clear challenges that tech companies in the NRV are facing and will continue to face in the near future.

Employment
Employment through tech companies in the NRV has remained stable despite COVID-19. Most (63%) of respondents said their number of employees has remained the same since the

beginning of the pandemic. Twelve percent of respondents did report a reduction in employee levels, two-thirds (67%) of them anticipate rehiring eliminated positions within a year.

Over a quarter (25%) of respondents indicated they had increased employment during the pandemic, reporting either a slight (17%) or substantial (8%) increase. Furthermore, over one-third (38%) of respondents said that they currently have unfilled job openings. Respondents reported that the most common hard to fill positions are software engineers, account executives, and production schedulers. There is clearly a continuing need for talent recruitment and retention efforts across the tech sector in the NRV.

Remote Work Trends
The survey revealed that COVID-19 has caused local tech companies to shift most of their workforce to remote work. Prior to the pandemic, three-fourths (75%) of survey respondents reported that less than 20% of their workforce worked remotely. In contrast, two-thirds (67%) of respondents reported that more than 81% of their employees were remote in late September. Respondents did indicate a slight decrease in the percentage of employees working remotely from July to September, signaling some tech workers were returning to the office.

Several tech leaders indicated that having a higher portion of their employees work remotely may persist even after the pandemic is over. One respondent stated that their company would have a "50% decrease in physical space needs" due to the increase in remote work, while another said, "we definitely value having a physical location and will keep it, but this only continues to fuel our ability to have employees located anywhere."

Almost half (46%) of respondents reported offering incentives for employees to work from home. Helping employees set up their home offices, whether through transferring existing equipment home or purchasing new equipment for employees, was one of the most frequently mentioned incentives. Other common incentives included providing stipends or reimbursements to run employees' home offices and upgrading employees' home internet service.

Overall Outlook
Tech leaders signaled an overall strong outlook for the coming year. Within the next twelve months, the vast majority (88%) of respondents reported that they had a steady or positive outlook for their company. Over three-fourths (79%) of respondents anticipated that the remaining duration of COVID-19 impacts on their business would resolve within one year from the survey date.

Leaders were also asked to forecast how many employees they anticipated having within six months to one year. Within six months, over half (54%) of respondents anticipated that their employment numbers would increase. Within the next year, three-fourths (75%) anticipated a modest (58%) or significant (17%) increase in employment. Only 4% of respondents expected to reduce employment within the next year.

Learn more about the survey and read a final report of the results below.

Onward NRV
IT Sector: Conditions and Outlook Report

Prepared by the Virginia Tech Office of Economic Development

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Executive Summary

Onward NRV engaged the Virginia Tech Office of Economic Development (OED) to assist with gathering information on the conditions and outlook for regional firms in the information technology sector.

The OED team conducted an electronic survey of selected information technology sector companies in the New River Valley in September of 2020. In addition, the OED team interviewed selected company leaders in each sector to more fully explore survey results and conditions. The project included a brief scan of global and national sector trends and conditions, mainly for comparison with regional data. The surveys, and interviews, represent a purposive or convenience sample. In other words, the respondents were a selected sub-group of companies identified by Onward NRV, and the results are instructive and useful, but do not comprise a representative sample of companies. Our report includes this executive summary and a summary of survey results. The survey response summaries exclude partial or incomplete submissions.

The Information Technology Sector: A Brief Summary

The New River Valley is a growing hub for IT sector companies and jobs. Over 1,000 new technology sector jobs have been announced here over the past two years. The sector includes firms in software development, cybersecurity, IT support, digital creative, and other areas. By some categorizations, the sector included over 90 companies and over 1,500 jobs. Prior to the pandemic, the sector has grown by 5% over the five previous years.

The Global IT sector is enormous, an over $5.2 trillion industry, with 32% of the global market in the United States.   Like the manufacturing sector, the IT sector also began to experience shifts immediately prior to the pandemic, some of which have since been accelerated due to the COVID-19 economic context.

For instance, many legacy categories that have been historically strong have declined (such as hardware, etc). Businesses and consumers are increasingly focusing spending on a narrower selection of platforms. The COVID-19 pandemic has accelerated this divergence. Over the next five years, growth in traditional tech spending is expected to be largely driven by just four platforms: cloud, mobile, social and big data/analytics. The cost savings to companies generated by cloud and automation may bring spending increases in newer technologies such as AI, robotics, AR/VR, next generation security, and blockchain.

Our survey of leaders in the New River Valley included 24 Information Technology responses (a 71% response rate). Most respondents were from Montgomery County, with one response from Floyd County.

More so than manufacturing, conditions have remained fairly stable for most respondents in the IT sector (payroll, employment, product offerings, pricing, etc.). Few employers have reduced their number of employees, and a quarter have continued hiring. Almost all respondents expect the number of employees to remain the same or increase within six months (23/24). However, over half of respondents have seen a decrease in sales or in pipeline demand indicators for their products or services.

The top three shared concerns include marketing, health and safety, and workforce. How to keep employees engaged and maintain organizational culture in remote environments was also a shared concern.

IT Survey Response

Section I: The Participants

The survey received 24 responses, primarily from respondents in Montgomery County (Fig. 1), representing a wide range of industries (Fig. 2).

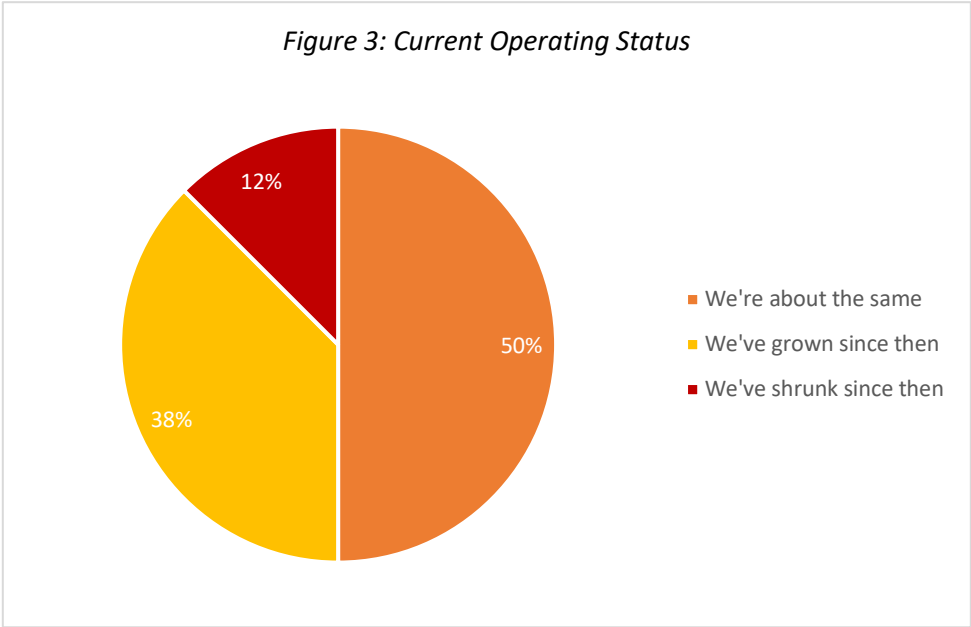| Figure 1: Regional Site Location of Respondents	
Floyd County	1
Montgomery County	23
Total	**24**

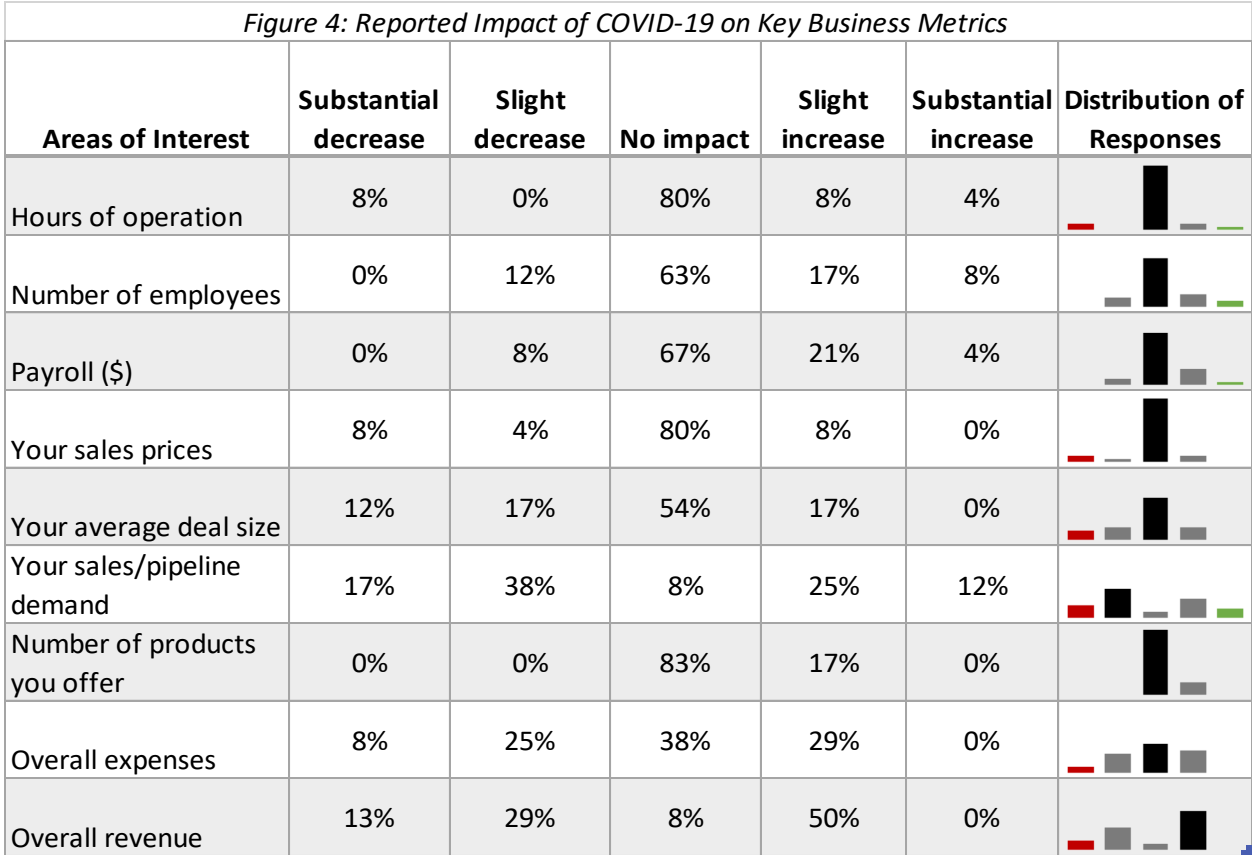| Figure 2: Industries of Respondents	
Professional, scientific, or technical services	6
Government & public administration	5
Networking & Communications	2
Government & public administration, Finance & insurance, Networking & Communications, Professional, scientific, or technical services	1
Government & public administration, Healthcare & nonprofit, Business management & logistics, Education, Retail & wholesale, Manufacturing & utilities, Real estate & construction, Media & entertainment, Accommodation & food services, Professional, scientific, or technical services	1
Government & public administration, Healthcare & nonprofit, Education	1
Government & public administration, Healthcare & nonprofit, Finance & insurance, Business management & logistics, Education, Manufacturing & utilities, Media & entertainment, Accommodation & food services, Professional, scientific, or technical services	1
Government & public administration, Healthcare & nonprofit, Finance & insurance, Business management & logistics, Education, Networking & Communications, Retail & wholesale, Manufacturing & utilities, Accommodation & food services, Professional, scientific, or technical services	1
Government & public administration, Healthcare & nonprofit, Finance & insurance, Business management & logistics, Education, Networking & Communications, Retail & wholesale, Manufacturing & utilities, Agriculture & mining, Real estate & construction, Media & entertainment, Professional, scientific or technical services	1
Government & public administration, Healthcare & nonprofit, Finance & insurance, Business management & logistics, Manufacturing & utilities, Real estate & construction, Accommodation & food services, Professional, scientific, or technical services	1
Government & public administration, Healthcare & nonprofit, Manufacturing & utilities, Agriculture & mining, Other (Testing Laboratories)	1
Healthcare & nonprofit, Education, Manufacturing & utilities, Professional, scientific or technical services, Other (Technology)	1
Manufacturing & utilities, Professional, scientific, or technical services	1
Other (Software)	1
Total	**24**

Section II: Impact of COVID-19

The vast majority (20 of 24) of respondents have either grown or stayed the same compared to pre-pandemic levels (Fig. 3). Only 3 respondents report shrinking since March, and no respondents selected "shut down temporarily" or "shut down permanently".

Figure 3: Current Operating Status

- We're about the same
- We've grown since then
- We've shrunk since then

Respondents were asked to evaluate the impact of COVID-19 on 9 key business performance metrics (Fig. 4). Notable findings include:

- Few employers have reduced their number of employees, and 1 in 4 have continued hiring. The effects on payroll and number of employees are nearly identical, indicating that furloughs have not been used to control expenses.
- The effect on sales and pipeline demand vary widely across businesses, indicating a mix of pandemic "winners and losers". Four respondents say they have expanded their product line during this time, and none report a decrease in products offered.
- The pandemic may have dampened growth overall, but half of respondents still report an increase in revenue. Only three respondents report a substantial decrease.
- One-third of responses indicate a decrease in average deal size, but few show a change in prices. Revenue, then, is increasing on volume for many respondents—they are making more sales, but smaller ones. Client businesses may be trying to control costs.
- More respondents report a decrease in expenses than an increase, a surprising finding considering respondents have been hiring. This could indicate that reduced expenses related to facilities have offset the cost of hiring.

Areas of Interest	Substantial decrease	Slight decrease	No impact	Slight increase	Substantial increase	Distribution of Responses
Figure 4: Reported Impact of COVID-19 on Key Business Metrics						
Hours of operation	8%	0%	80%	8%	4%	
Number of employees	0%	12%	63%	17%	8%	
Payroll ($)	0%	8%	67%	21%	4%	
Your sales prices	8%	4%	80%	8%	0%	
Your average deal size	12%	17%	54%	17%	0%	
Your sales/pipeline demand	17%	38%	8%	25%	12%	
Number of products you offer	0%	0%	83%	17%	0%	
Overall expenses	8%	25%	38%	29%	0%	
Overall revenue	13%	29%	8%	50%	0%	

Respondents were divided on how long impacts may continue, but half anticipate 6-12 months (Fig. 5). This highlights ongoing uncertainty, but also that some businesses may take longer to recover than others.

| *Figure 5: Expectations for Remaining Duration of COVID-19 Impacts*	
1-3 months	1
4-6 months	6
6-12 months	12
12-24 months	4
Longer than 24 months	1
Total	**24**

II.I: Workforce Impacts

The three respondents who indicated that their number of employees had decreased were also asked when they anticipated rehiring for eliminated positions. Their responses are below in chronological order (Fig. 6).

Figure 6: Anticipated Rehiring Dates for Eliminated Positions
⅄ Q2 2021
⅄ 1-year *(this would be September 2021)*
⅄ *(blank)*

All respondents also provided the percentage of employees working remotely at three points in time: before the pandemic, in mid-July, and currently (late September). Most respondents had remote workers before the pandemic, including four respondents with over 40% of employees working remotely (Fig. 7). By Mid-July, all but four respondents were at least 81% remote. Few respondents have altered their practices since, suggesting health concerns remain high.

Figure 7: Percent of Employees Working Remotely at 3 Points in Time
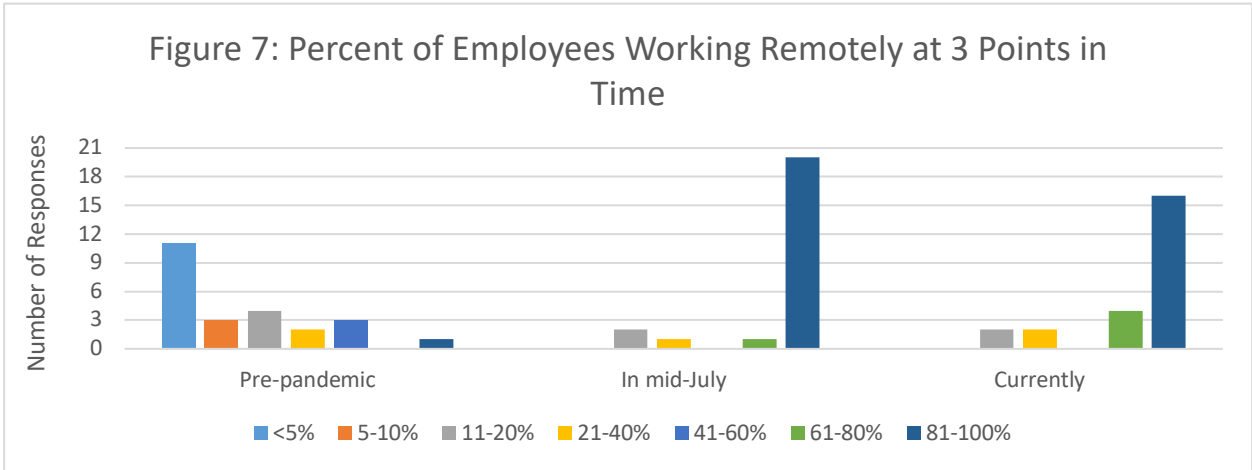
"**Workplace culture and communication is a big issue - everyone is stressed, and chronic medium-grade stress affects everything.**" *-Interview respondent*

8

Four respondents indicated that their needs for physical space had changed as a result of the pandemic. The three that elaborated all agree that their experience of an entirely remote office makes them more comfortable with the idea of permanently remote coworkers. Their answers verbatim below:

> - *"more people can be 100% remote lowering office space requirements"*
> - *"50% decrease in physical space needs."*
>
> - *"I do think we've seen how successful we can work remotely and that opens up options as we look at what physical space is needed. We definitely value having a physical location and will keep it, but this only continues to fuel our ability to have employees located anywhere."*

Eleven respondents reported offering incentives for employees to work from home. The most common incentives included reimbursements for computer equipment and internet bills. All answers verbatim below:

> - *"All equipment is provided by company"*
> - *"Purchased laptops, monitors, and necessary equipment to provide to employees to enable them to work from home or remote locations."*
> - *"Employees who were typically in the office were allowed to bring all of their equipment home to set up a home office. We are also allowing for flexible hours to accommodate for childcare and school changes."*
> - *"Mileage paid for driving to/from client offices or our office."*
> - *"Computers, monitors, etc. to optimize home workspace."*
> - *"Monthly stipend to cover home office expenses"*
> - *"Reimbursement for equipment. Gift cards for food delivery."*
> - *"Transferred required office equipment (monitors and docks) to home office"*
> - *"We are providing equipment as needed and offsetting some network costs if they need better connectivity at home"*
> - *"We have offered to upgrade home internet service."*
> - *"We increased our cell phone and internet reimbursement and have helped defray home-office expenses."*
> - *"We offer phone, internet, office supply and some computer equipment reimbursement to employees."*

Four respondents also reported placing restrictions on remote workers, with three restricting business travel and one setting "core business hours".

38% of respondents (9/24) say they have unfilled local positions.

Of 24 respondents, nine reported having unfilled positions in their local offices. Figure 8 details the job titles respondents described as "hard to fill", along with the corresponding locations and industries.

Figure 8: Current and/or Recurring Open Positions that are Hard to Fill	
Job Title(s)	**Industry**
Account Executive, Operational Engineer, Software Engineer	Other (Software)
C++ software developer	Government & public administration, Finance & insurance, Networking & Communications, Professional, scientific, or technical services
Junior Account Executive	Government & public administration, Healthcare & nonprofit, Manufacturing & utilities, Agriculture & mining, Other (Testing laboratories)
Principal Software Engineer, Customer Support Specialist	Professional, scientific, or technical services
Senior Engineers, Production Scheduling Manager, Business Analyst	Professional, scientific, or technical services
Software engineer, Product designer, Product manager, Production scheduler	Professional, scientific, or technical services

One obstacle may be a lack of diversity. When asked whether a lack of racial diversity, at their company or in the area, had a negative impact on recruiting diverse candidates to these positions, 11 responded "Yes", 9 "No" and 4 were "Unsure".

Respondents were also asked to estimate how many employees they would have six months and one year from now (Fig. 9). Almost all expect headcount to remain about the same or increase within 6 months (23 of 24), and a large majority (18 of 24) expected an increase within a year. No respondent selected "Significantly less" for either period.

Figure 9: Expected Headcount in 6 and 12 Months				
	In 6 months	**In 6 mos. (%)**	**In 12 months**	**In 12 mos. (%)**
A modest reduction	1	4%	1	4%
About the same	10	42%	5	21%
A modest increase	13	54%	14	58%
Significantly more	0	0%	4	17%
Total	**24**		**24**	

Section IV: Concerns & Opportunities

To help formulate content for the upcoming virtual summit, respondents were asked to rank their top three concerns (Figure 10). Most respondents briefly explained the reasoning behind their top three concerns in an optional free-answer section. These responses are included in the Appendix.

Top concerns vary widely. Of 24 respondents, 15 rated Marketing (lead generation, pipeline development) among their top three. While fewer respondents placed Health & Safety among their top three, it was the most common first choice, suggesting that those who are concerned about it are *very* concerned. Workforce (recruiting, training, diversity, retention) was ranked among the top three by 11 respondents but tended to rank behind other considerations.

Figure 10: Top Concerns (Rank 3 from 7)
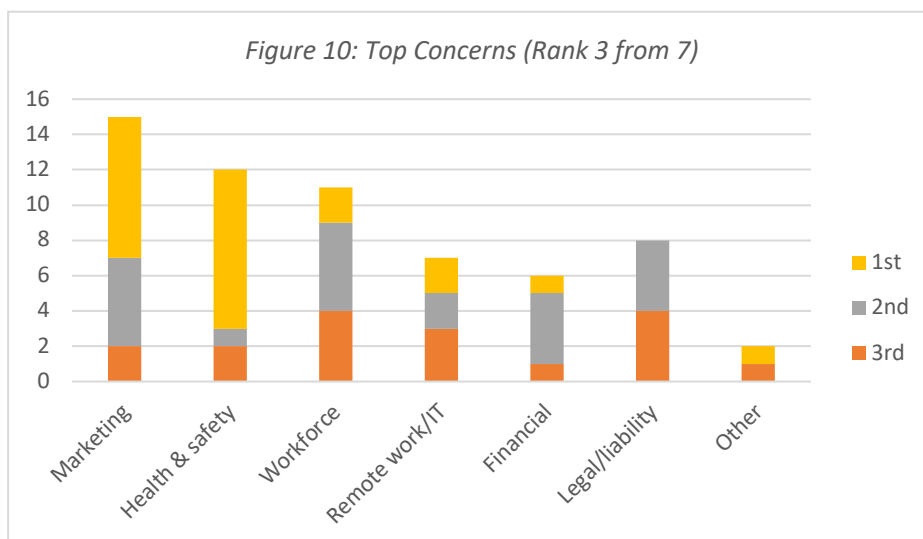
Three respondents added "Other" concerns that did not fit in any of the pre-defined options:
- Remote Expenses (Appropriate compensation for remote worker's use of home facilities)
- Taking care of parent-employees
- Access to talent to support growth

Respondents were also asked to indicate if they would be interested in a peer-discussion format or expert-led seminar on 14 pre-selected topics and invited to suggest their own. The top two vote-getters, with nine and eight votes respectively, were "Marketing/business development" and "Employee morale and company culture" (Figure 11). Surprisingly, "Legal liability to employees, suppliers, or clients" ranks at the bottom, despite "Legal/liability" being among the top concerns above. This disparity will be studied in the interview phase.

Figure 11: Virtual Summit Topics of Interest	Votes
Marketing/business development (including strategies for acquiring new business virtually and in-person)	9
Employee morale and company culture	8
Growth management/growing your customer base	5
Response planning if an employee tests positive	4
Managing remote workers	4
Altering or reconfiguring physical spaces	3
Complying with new workforce safety rules	3
Offering/managing internships and co-ops during COVID-19	3
Addressing a lack of employee diversity	3
Managing parents in light of changes to public schools	2
Family Medical Leave Act and COVID-19	2
Federal, state, and local relief programs	2
Communication tools and strategies to offset masks, social distancing, and other safety requirements	2
Legal liability to employees, suppliers, or clients	2

Additional topics suggested:

- Business development in a remote environment
- How to get involved in volunteer efforts while keeping physically distanced.
- Are companies creating or updating a telecommuting policy that will go into effect once their office opens back up.

Overall, respondents remain optimistic about the overall outlook for their business in the NRV over the next 6-12 months (Fig. 12), with 17 of 24 reporting positive expectations. Nonetheless, three respondents report a negative outlook.

Figure 12: Overall Outlook (6-12 Months)	
Significantly negative - the coming months will be very difficult for us	1
Slightly negative - we see continuing but moderate negative impacts ahead	2
Steady state - we expect no major changes	4
Slightly positive - we expect moderate growth	8
Very positive - we expect to grow and thrive	9
Total	**24**

Appendix A: Selected Reasons for Top 3 Concerns

Information Technology

When asked to explain their choices, respondents offered deep insights into their companies and the new balancing act between business growth and employee safety:

***Financial is the only metric we can care about at this point**.*

Applicants are attracted to good pay, career opportunities, and workforce culture.

*Long term impact of pandemic on our main target market of higher education, **challenges of recruiting diversity** in Blacksburg.*

*Health is top of mind, but then **how do we stay productive remotely**.*

We want to continue to grow our business and thrive.

*We're operating in **uncharted territory** which brings the health of my employees paramount, as well as the health of my organization from a legal and liability perspective. Our demand has gone up, but I feel that there is some **lack of quality in our sales pipeline** now that we've shifted all of our client meetings remote.*

*I think the biggest long-term changes from COVID will be **marketing and workforce happiness**.*

*We rely on in person events - those stopped. So **lead gen is a challenge**. We are in the process of securing **VC funding** and expect to be successful.*

*The current economic climate seems like an ideal time to grow. With growth, we'd like to maximize our client and employee health and safety, while minimizing our **legal liability**.*

***Health and safety of employees is our main concern**, marketing and remote work during these times as well is different than before.*

*The health and safety of our employees, customers and community are a top concern, as well as **legal liability**.*

*Regarding health and safety, **we want to ensure employees are kept safe** once we're back in the office.*

*It is important to learn **how to best manage productivity at home** and to continue lead generating as well as understand the health and safety concerns/regulations going forward.*

How do we move forward as safely and quickly as possible.

*The pandemic is changing the way we go to market. **Finding new ways to engage prospective clients** without tradeshows and travel is a top priority. We have significant focus on improving our digital marketing efforts. **Retaining and growing our workforce** continues to be a top priority, especially here in our region where access to talent is so competitive. We have aggressive growth goals, so our financial strategy and how we look at opportunities to grow and fund our company are always top-of-mind.*