

February 2021

2021 Global Insights Survey of Forensics Labs

The Impact of SARS-CoV-2 on Challenges,
Priorities, and Opportunities



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Introduction

2020 was an unprecedented year dominated by the global pandemic SARS-CoV-2 as well as worldwide economic distress, unemployment, housing and food insecurity, and social unrest. These significant disruptions impacted all aspects of life, fundamentally changing human interactions through repeated periods of lockdowns and stay-at-home recommendations.

Forensic laboratory operations and planning were not immune to these seismic shifts as many teams around the world experienced changes to workforces, budgets, and even crime rates in their local jurisdictions. Although continued uncertainty has made forecasting for laboratory needs and challenges particularly difficult, exploring the current and anticipated impact of societal and market changes may help to better respond to future trends in the industry.

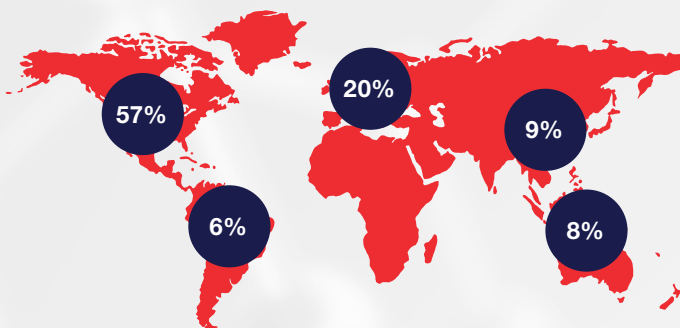
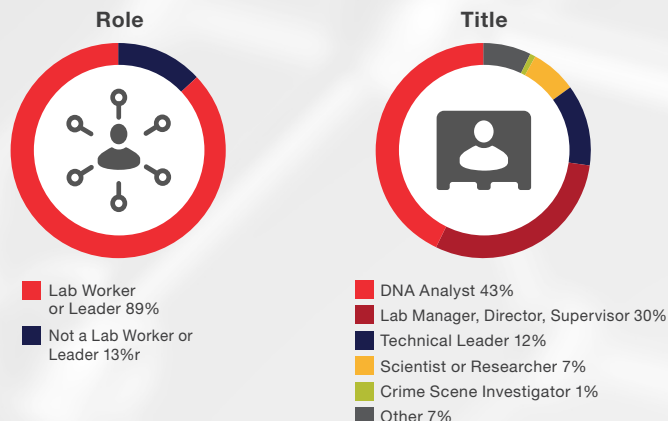
To that end, a global analysis was undertaken to engage leaders in the forensic laboratory ecosystem to better:

- Understand current crime statistics and trends and how they may have impacted workload, focus, and priorities.
- Explore the impact SARS-CoV-2, economic disruptions, and other factors have had on budgeting, staffing, and future forecasting.

Ogilvy's Research and Intelligence team conducted an audit of proprietary and publicly available resources to understand the current trends and forecasting in the field. To validate and build upon these findings, a third-party research firm, ProdegeMR, was engaged to conduct a 15-minute, English-language online survey of 148 forensic DNA professionals between December 2, 2020 and January 18, 2021. Insights from the survey results were augmented with existing findings from qualitative interviews conducted with 32 leaders representing labs and distributors of HID instruments and consumables in China.

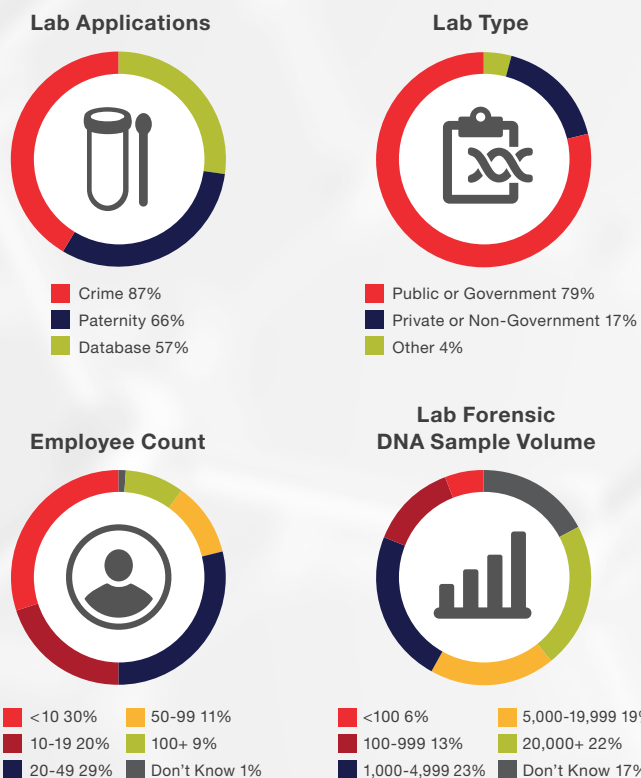
Respondent Details

A total of **148** forensic DNA professionals participated in this global survey



Lab Details

Many respondents identified as working in a public lab and with both crime and non-crime samples.



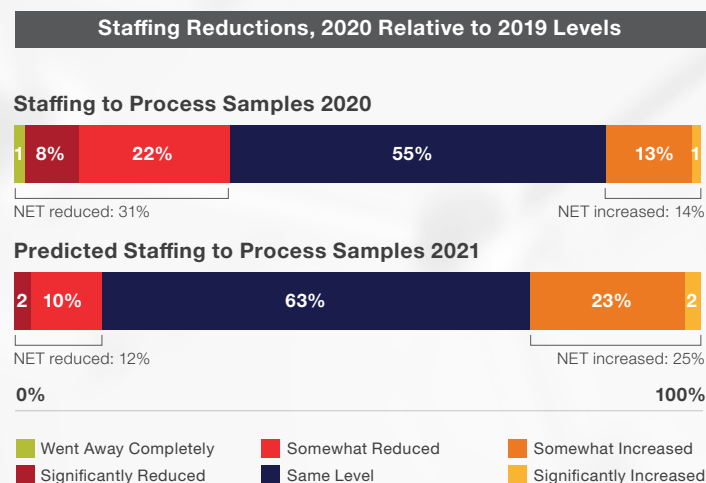
Findings

The Global Insights Survey of Forensics Labs focused on quantifying key challenges and priorities across staffing, planning, and budgets. Unless otherwise indicated, results are shared as global trends and industry insights. Where sample sizes allow, results have been analyzed for potential differences between subgroups (e.g., respondents from labs that reduced overall budget in 2020 vs. respondents from labs that did not). Statistically significant subgroup differences at a 95% confidence interval are indicated with an asterisk (*) in survey findings throughout.

Staffing Trends

Staffing reductions made in 2020 are likely to reverse or cease.

Lab professionals are optimistic about 2021 lab staffing, with many predicting that the resourcing contractions that characterized 2020 will either reverse or cease. There was a slight contraction in lab staffing to process samples in 2020, compared to 2019, with nearly a third (31%) reporting a reduction and 55% reporting that staffing levels were the same. There is a more positive outlook for 2021, with only 12% predicting reductions, 63% no change, and 25% predicting an increase in staffing.



Outsourcing needs vary, but lab leaders are optimistic.

Labs moved slightly toward outsourcing in 2020, compared to 2019. Opinions are divided on the need for outsourcing moving forward, with 23% indicating a permanent need, 14% believing the need is temporary for the duration of the pandemic, and 36% indicating no need to outsource. Although there is no global consensus on an ongoing need for outsourcing, those with more insight into lab workings may be more optimistic, with fewer lab leaders indicating that outsourcing is needed (23% vs. 44%*). More U.S. respondents report a need to increase outsourcing (45%* vs. 27%).

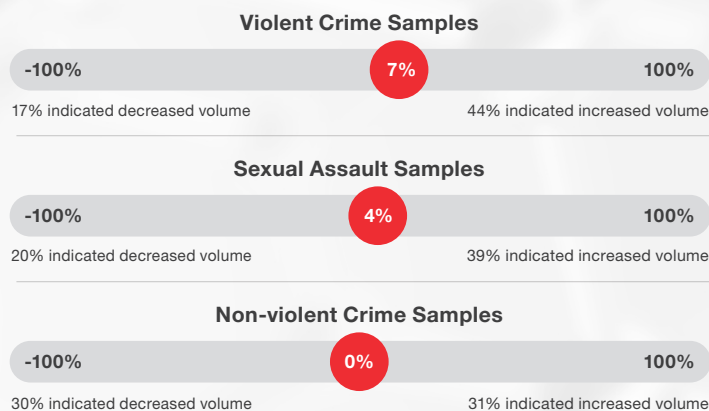
Continuing education is still important.

Lab professionals consistently report a need for remote professional learning. Two-thirds (68%) indicate that remote continuing educational opportunities or learning platforms is a permanent trend that will continue to be needed even after the pandemic.

Planning Trends

Violent crime and sexual assault sample volume increased.

Relative to the previous year, many survey respondents indicated they saw increases in violent crime and sexual assault sample volume in 2020. Non-violent crime samples were more varied.



Decreased 2020 volume in paternity/familial samples was more commonly reported by those outside the U.S. (39%*), compared to those in the U.S. (15%).

Secondary Research Findings: Crime Appears to Be Dropping

In most cases, we are seeing historic lows in crime across Europe and the United States.



France: All crime, except for domestic violence, decreased during the lockdown with theft down 80%.



Germany: Although right- and left-wing extremist crime is rising, murders are down 23% and violent crime cases are down 14% (2008-2019).



Italy: The total number of crimes is down 16% (2014-2018) with robberies down 51% (2011-2019) and sexual violence down 15% (2014-2018).



The Netherlands: From 2012-2019, burglary was down 57%, murder/manslaughter down 32%, and sexual crimes down 10%.



United Kingdom: Notifiable crime was down 14% in July 2020 compared to July 2019, though homicides ticked up from 2019-2020.



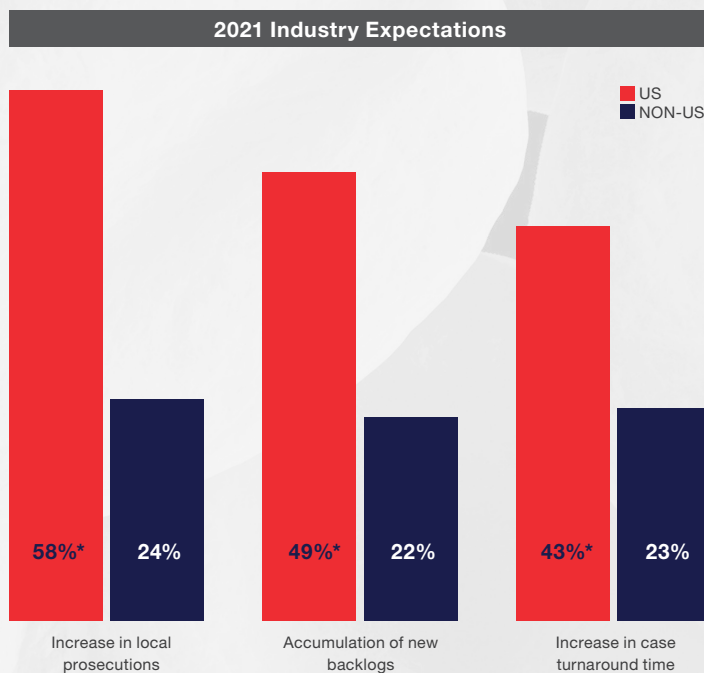
United States: Drug offenses and larceny fell during the pandemic, while violent crime dropped by 2.2% overall.

Crime sample volume increases are anticipated.

About half of lab professionals expect crime sample volume to increase in 2021. (i.e., 52% violent crime samples, 53% sexual assault samples, 48% non-violent crime samples.) Those whose lab budgets were reduced in 2020 are more likely to expect that sample volumes would increase for paternity/familial samples, in particular, in 2021 (42%* vs. 19% of those at labs without reduced budgets). These labs were also more likely to predict that sample volumes across violent and non-violent crime will increase in the coming year.

Local prosecutions, backlogs, and case turnarounds will remain steady.

In 2020, over half of respondents reported a general reduction in prosecutions involving DNA and some reported an increase in case turnaround time. Although the majority of participants do not expect changes to local prosecutions, case turnaround time, and backlogs in 2021, those based in the U.S. are more likely to predict increases.



76%* of those in the US saw either a temporary or permanent need to increase the backlog for non-critical cases, compared to 52% of those outside the US.

Those at labs with 5K+ annual sample volumes are more likely to indicate that reducing samples processed per case is needed in 2021 and beyond (66%* vs. 45%).

Secondary Research Findings: Pandemic's Impact on Backlogs



The Netherlands: Drops in physical crimes during lockdown allowed police to resolve backlogs in investigative cases.



South Africa: The accumulated total backlog of DNA case exhibits is now well over 100,000. 92% of the 300% increase in backlogs is driven by sexual assault kits.



United Kingdom: Promised increases in funding were scrapped due to the pandemic. The backlog in crown courts is 43,676 cases and rising and the conviction rate is less than 3%.



United States: Decreasing crime rates in the U.S. and increased funding by the government and charitable organizations have allowed many crime labs throughout the country to work toward reducing backlogs.

Despite pandemic challenges, many labs reduced or maintained backlogs.

Respondents believe that they were able to process more of their labs backlog in 2020 (34% reduced rate of backlog processing) than they predict they will in 2021 (20% predict reduction in processing rate). Those at labs with budgets that were reduced in 2020 are more likely to have accumulated new backlog (55%* vs. 31%) those based in the U.S. are more likely to predict accumulation of new backlogs in 2021.

Forensic DNA is still a priority.

About one in five (21%) report an increased prioritization for forensic DNA from 2019-2020, and the same proportion predicted an increase for 2021 (21%). Although 11% report a de-prioritization for forensic DNA from 2019-2020, more stability may be on the horizon for 2021. Slightly fewer (5%) predicted a de-prioritization for this in 2021.

Interest in robotics, automation, and remote analysis will continue.

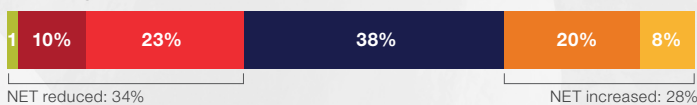
Most (76%) perceive an increase in robotics/automation as a permanent trend that is needed after the pandemic. About one in five (19%) predict an increase in a 2021 budget for robotics/automation, compared to 9% reporting an increase in that budget in 2020. Many see the increase of remote/at home data analysis capabilities as either a permanent need (49%) or temporary need (39%).

U.S. labs are exploring automation.

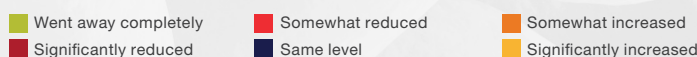
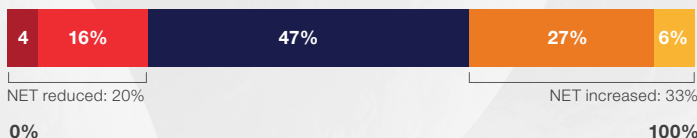
Because many forensic laboratories in the United States have experienced an increase in the volume of evidence while also seeing a substantial decrease in funding, investments are being made in automation, digital workflow, working paperless, and business improvement initiatives in order to "do more with less."

Backlog Changes, 2020 Relative to 2019 Levels

Backlog Samples to Process, 2020



Predicted Backlog Samples to Process, 2021

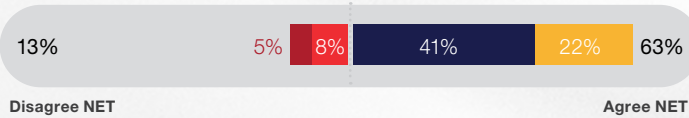


DNA forensic labs are expected to be busier in 2021.

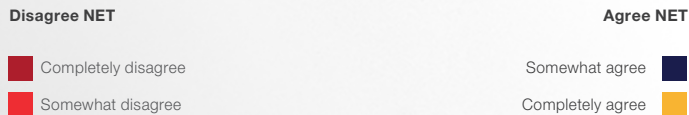
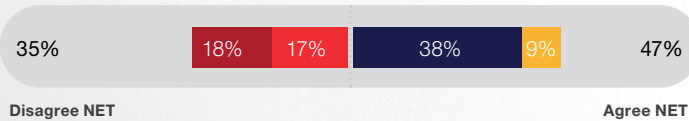
Nearly two-thirds (63%) believe their DNA forensic lab will be a lot busier in 2021 than it was in 2020.

Lab Professional's Agreement Levels With Lab Predictions

I believe my DNA forensic lab will be a lot busier in 2021 than it was in 2020

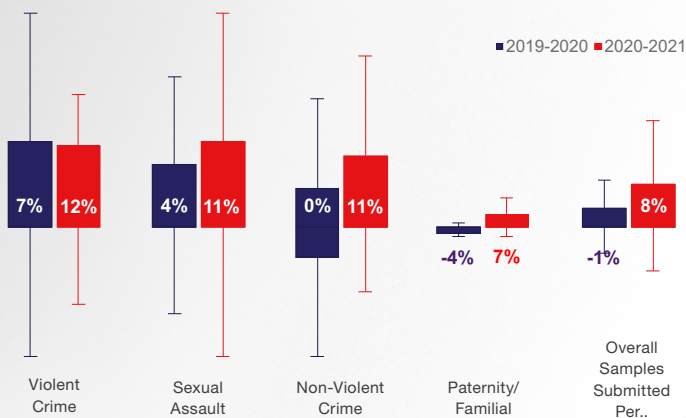


The SARS-CoV-2 pandemic has permanently altered the way my DNA forensic lab operates



While sample volume overall decreased last year, most respondents do not anticipate further contraction in 2021, with about half indicating that submitted crime samples (including violent, sexual assault and non-violent) will increase in 2021.

Year-Over-Year Percentage Change and Predicted Change in Sample Volumes



Pandemic-specific Impacts



Perceptions vary as to the pandemic's impact on lab operations.

Some (47%) think that the SARS-CoV-2 pandemic has permanently altered the way their DNA forensic lab operates, although those outside the U.S. are more likely to disagree with this sentiment (44%* vs. 26%).



Pandemic protocols are expected to be temporary.

Changes to shifts and workflows to accommodate SARS-CoV-2 protocols (67%) and routine SARS-CoV-2 screening for employees (56%) during the pandemic are considered only temporary, if necessary, at all.



Most do not want to convert to SARS-CoV-2 testing labs.

A majority of respondents (76%) believe it does not make sense to change their DNA forensics lab to a SARS-CoV-2 testing lab for the duration of the pandemic.

Budget Trends

Budgets & lab activities were impacted by the pandemic.

For those who indicated that there were significant reductions to their lab budgets and activities in 2020, SARS-CoV-2 pandemic and lockdowns was the only or the main reason for changes they saw in the rate of backlog processing (88%), overall lab budgets (83%), budgets for instruments & robotics/automation (79%), local prosecutions involving forensic DNA evidence (78%), budgets for reagents (77%), and staffing to process samples (75%).

Impact of SARS-CoV-2 on Change in Lab Activities

Results represent lab professionals who indicated each of the following was significantly reduced or went away completely at their lab in 2020, compared to 2019.

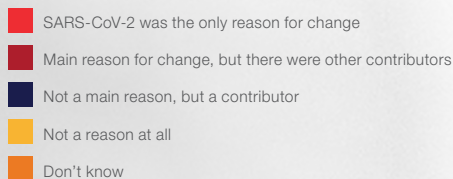
Lab budget overall n=23



Budget for instruments and robotics/automation n=24



Local prosecutions involving forensic DNA evidence n=48



2021 budgets are expected to remain steady.

Overall, lab professionals seem to be less optimistic when it comes to budget increases. Predictions for 2021 are similar to experiences reported for 2019-2020. This is true for lab budget overall (8% vs. 12% increase), and budget for reagents (8% vs. 14%).

- Those based in the U.S. are more likely to report a reduction in lab budget overall (52%* vs. 34%).
- Those at labs with budgets that were reduced in 2020 are more likely to have accumulated new backlog (55% vs. 31%).
- Those more likely to agree that key purchasing criteria have changed include: Those whose lab budgets were reduced in 2020 (54% vs. 30%) and those who anticipate budget reduction in 2021 (57%* vs. 29%).



Trends Seen in China

In interviews conducted across the forensics ecosystem in China*, major trends mentioned included:

- Increased reliance on video investigation/face detection
- Construction of more labs, especially in lower tier cities
- Increased demand for end-to-end solutions
- Increased demand for automation, higher-throughput, and integration with the national DNA databases
- Continued use of DNA testing to connect the evidence chain
- Continued impact of SARS-CoV-2 on budgets

*Cathaya Research Report, October 2020

Sources

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Research and insights for the 2021 Global Insights Survey of Forensic Labs were gathered through secondary research, interviews, and a global anonymous survey deployed by ProdegeMR and analyzed by Ogilvy Health and Ogilvy's Research & Intelligence team. This project was funded by Thermo Fisher Scientific as part of its efforts to educate, engage, and empower forensic scientists across the globe.

For more information, visit thermofisher.com/HID
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