



# WAITRO://50 Virtual Innovation Summit 2020

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Report: Meeting the changing conditions  
following the covid-19 pandemic



**WAITRO** 

WORLD  
ASSOCIATION OF  
INDUSTRIAL AND  
TECHNOLOGICAL  
RESEARCH  
ORGANIZATIONS

# Introduction

How will WAITRO RTOs, both on site as well as remotely, support businesses, value chains and organisations affected by the COVID-19 crisis?

At the WAITRO virtual innovation summit a couple of presentations were given on this topic in terms of the impacts of the pandemic on economies, businesses and the operations of Research and Technology Organisations and the opportunities that have arisen in relation to lateral innovations, digitized transformations, local supply chain development, technological developments directly related to covid-19 detection, diagnosis, treatment, vaccine, social distancing, etc.

Also a survey was conducted amongst WAITRO members and associated RTOs to examine actions undertaken by these organizations and more importantly the implications and experiences obtained during the Covid-19 pandemic so far. We received 25 responses to the survey and the results are presented in this report.

## Impact of COVID-19 pandemic on RTOs

The RTOs responding to the survey represent all major continents of the world (Africa, Americas, Middle East, Asia and Europe) and hence is representative of the world.

According to figure 1, the majority of RTOs indicate that they have been affected of the crisis to a medium degree, whereas 28% indicate that they are affected to a high degree. Only 2 out of 25 indicate that they are impacted to a low degree.

**To what extend has your institute been affected by the COVID-19 crisis?**

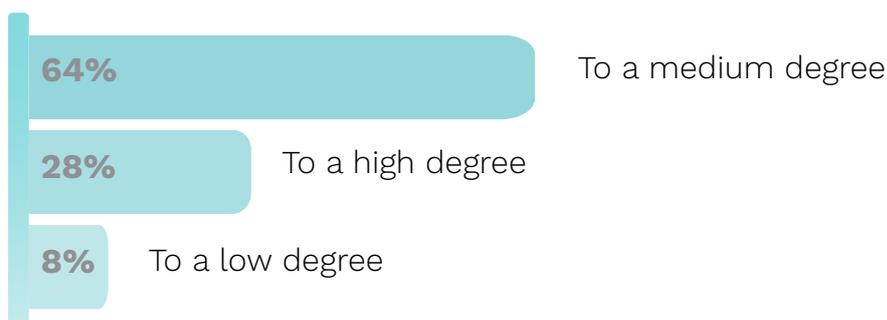


Figure 1

Several RTOs have experienced a range of implications of the pandemic. As the figure 2 shows, it is not surprising that 84% indicate that their staff have had to work partly or fully from home during the pandemic. 76% of RTOs have seen activities being modified compared to how they first planned and 52% has experienced cancelation of activities. 72% have seen lower level of activity (and incidentally 16% have seen higher level of activity during the pandemic). Events planned have been cancelled (60% of RTO respondents) or modified (56% of RTO respondents). 40% of RTOs have had staff being absent from duty due to the pandemic, but fortunately only 12% of the responding RTOs have had to lay off staff due to the pandemic.

**What impacts has your institute experienced during the COVID-19 crisis?**



Figure 2

The survey also asks RTOs whether they have experienced increase or decrease in the average sizes of assignments and whether new assignments primarily have come from new clients or from existing clients and the trends indicated are towards smaller assignments with existing clients, which is not surprising given that it will have been difficult to approach new clients and demand on general will have decreased. Nevertheless, there are RTOs that even during the pandemic have managed to generate assignments from new clients and also examples of RTOs that have generated assignments that on average are larger than normal (see figure 3).

Speculating on the reasons for this, it could be that clients who have seen new opportunities specifically due to pandemic have emerged as clients and maybe in some cases also offering larger assignments. Discussions during the Q&A sessions of the Virtual Innovation Summit in relation to this topic and also studying the examples given by the RTOs of new markets emerging and business innovations supported, seems to suggest that product developments directly related to addressing the challenges of the pandemic have led to new and larger than average assignments.

To what extent has your institute/ organisation experienced changes in the size and nature of assignments with private businesses during the COVID-19 crisis?

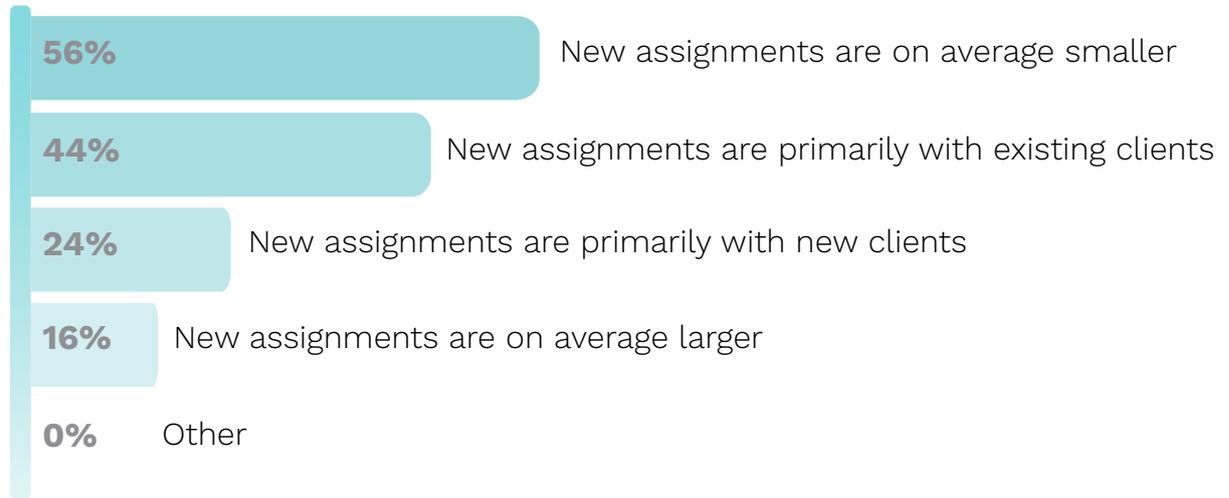


Figure 3



# RTO reactions to the changing conditions.

RTOs have found innovative ways of dealing with the implications of the Covid-19 pandemic. In many ways just like the clients they are serving, they have had to adapt quickly to the restrictions and changing market conditions. As Figure 4 below illustrates, 80% of RTO respondents report that they have conducted online/video-based meetings with clients; 64% of respondents report that they have introduced online conferences and/or webinars. Just over half (52%) have managed to conduct physical meetings with social distancing and incorporating necessary precautions and 44% of respondents have used e-mail, chat and chat-bots to communicate with clients. In terms of international projects 36% have managed by bringing partners together in online meetings. Online technology demonstrations have been used by a further 36% of respondents and 32% of respondents have introduced online instruction, trouble shooting or advisory services. All in all, it is evidence of adaptive approaches to dealing with the implications of the covid-19 restrictions.

## How has your institute tried to solve the challenge of delivering your services to business clients during the COVID-19 crisis?

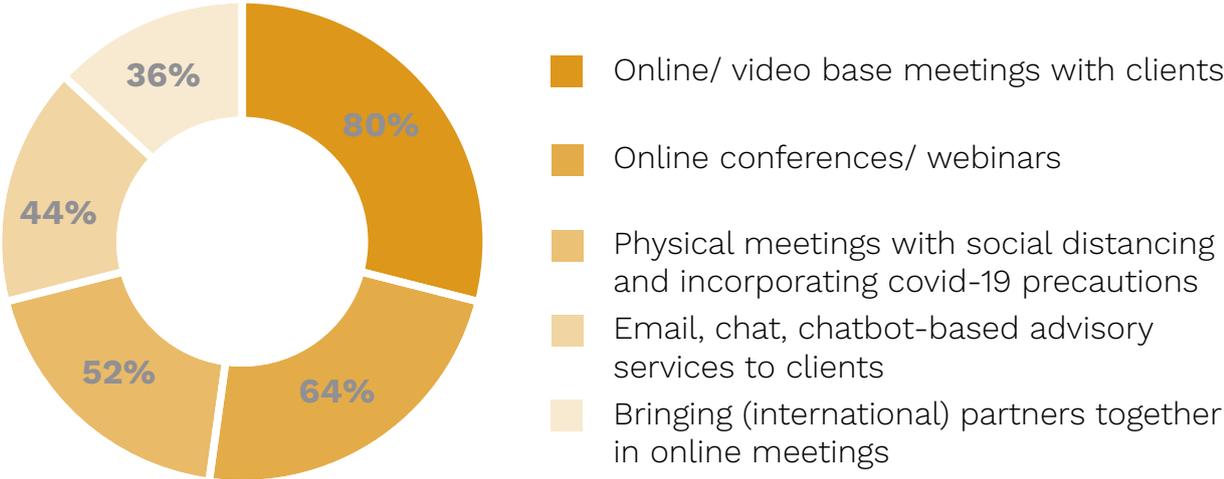


Figure 4

According to figure 5, almost half of the responding RTOs have developed new markets during the covid-19 crisis. It shows that many RTOs have shown agility in relation to changing market conditions. Any crisis will offer both challenges as well as opportunities for all RTOs and it is important to analyze the implications carefully and seizing the opportunities that will arise. Now in terms of the current pandemic crisis the opportunities obviously lie in the increased demands for medical products, protective measures and equipment and the R&D needed in diagnostics, treatment and vaccine solutions, but also in terms of the changing behaviours and demands as side effects of the pandemic, such as the increases in e-commerce, increases in sales of certain products and changing needs of businesses.

**Has your institute/ organisation developed new market areas as a result of the COVID-19 crisis?**

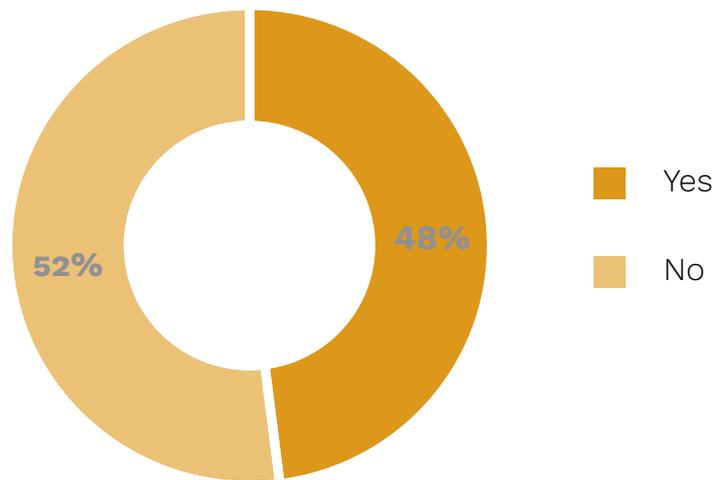


Figure 5



The table 1 presents the stated new markets developed by the 12 RTOs during the Covid-19 crisis. It is evident that the majority is relating to the medical, preventive and protective implications of the pandemic, but there also markets like online advisory and education markets which have become attractive due to the pandemic.

<b>New markets developed by institutes</b>
<ul style="list-style-type: none"> <li>• “Medical device company, pharmaceutical company”</li> <li>• “Targeting International Students in the Eastern Africa Region“</li> <li>• “Sanitizer making and masks production“</li> <li>• “(1) Packaging Technologies suitable for E-commerce and logistic. (2) R&amp;D, Testing, Certification for Medical Equipment“</li> <li>• “Namibia online advisory support, smart automation support, online training sessions“</li> <li>• “Development of face masks. Production of methanol from Agricultural source.“</li> <li>• “COVID PCR testing“</li> <li>• “Research on COVID-19 Vaccines, protective clothing, quick test procedures Resilience in times of crises“</li> <li>• “Webinars“</li> <li>• “Online services such as training and consultation“</li> <li>• “Testing of masks; app development to support pandemic resilience“</li> <li>• “More testing services for purposes of commercialization of products that before had a very small and informal market (e.g. friends, colleagues, family)“</li> </ul>

Table 1

Training (60% of respondents) has been most in demand among the majority of respondents followed by technology (44%), innovation (40%) and standards and regulation (40%) advisory services. 36% of respondents suggest that product tests have been most in demand and 32% say product development. It is good news that one third of RTOs still manage to work on developments and testing of products during the pandemic.

**Which kind of services have been most in demand during the COVID-19 crisis (please prioritise)?**

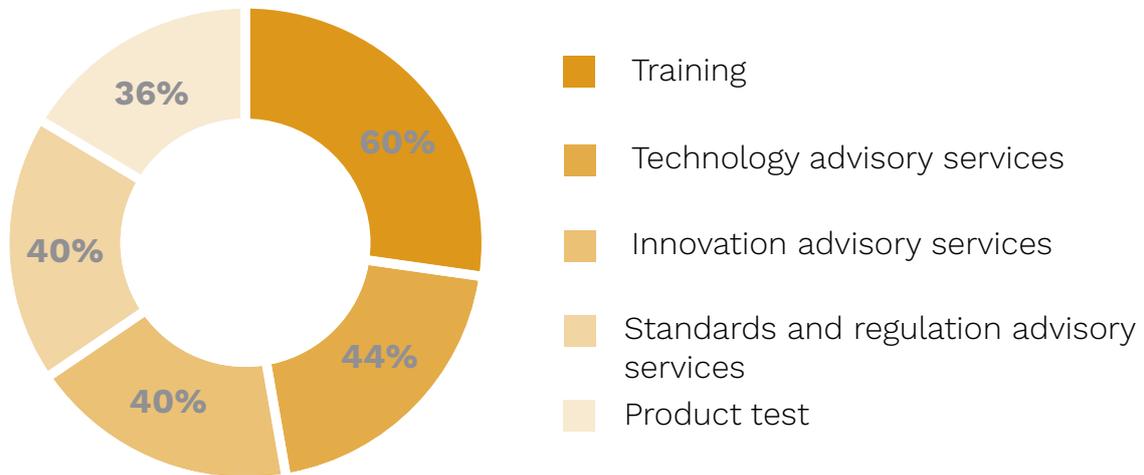


Figure 6

The RTO respondents have all experienced markets where their sales volume have decreased to levels 50% lower than compared to last year. It is no surprise that cultural/tourism sectors top that list for 40% of respondents. 32% of respondents, have seen 50% drops in sales within manufacturing and private services. Also public services, retail/wholesale and transport markets have for 28% of respondents been strongly affected in terms of reduced sales volumes. Sectors with least negative effects are agriculture (12%) chemicals and pharmaceuticals (12%) food processing (4%) and information and communication technologies (4%).

**In which of your market segments have you during the COVID-19 crisis experienced a less than 50% sales volumes compared to last year?**

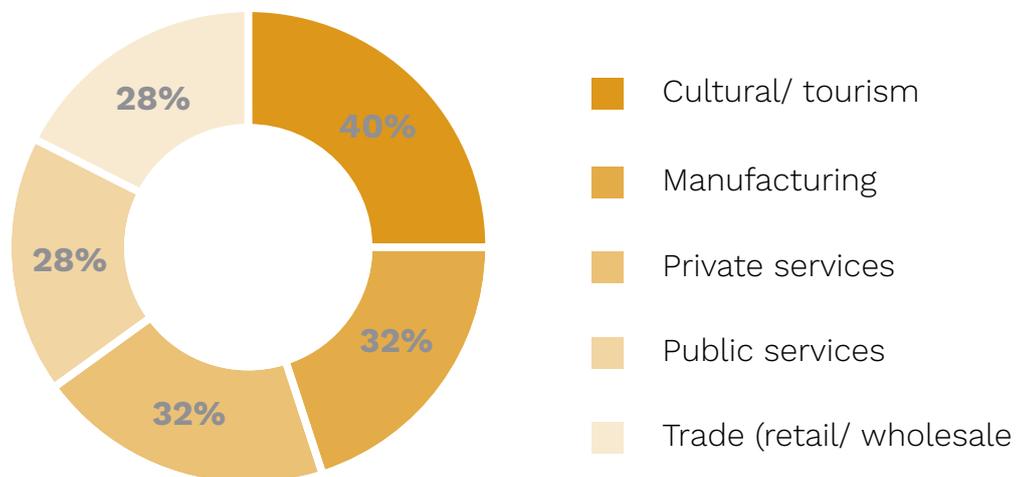


Figure 7

Not only have almost half of RTOs developed new markets as shown in figure 5, almost half of RTOs have also managed to help businesses during the Covid-19 develop new business opportunities driven by the Covid-19 (see figure 8). This shows that RTOs are seizing the moment and are positioning themselves as key innovation partners to the business community.

**Are you aware of private businesses that with the help of your institute have developed new business opportunities driven by the COVID-19 crisis?**

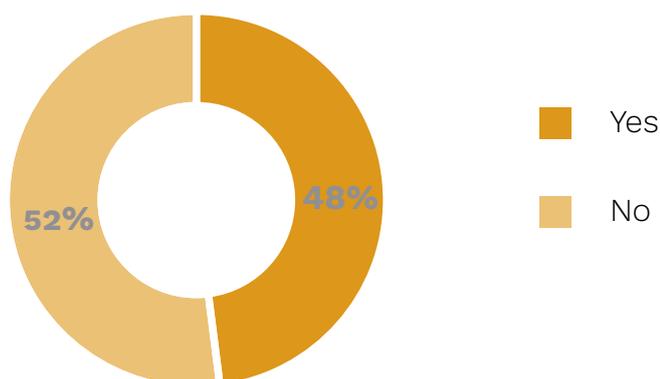


Figure 8

Table 2 shows the kind of new products and business opportunities that some RTOs have helped businesses develop during the covid-19 pandemic. The question is how can WAITRO in the near future strengthen the position of its members in responding innovatively to the challenges raised by the pandemic?

### Examples of businesses creating new products/opportunities:

- “Clinical trial related to herbal medicine, virus eliminator product, material and device for Covid detection“
- “Mask production, sanitizer and soap making“
- “Farmers to sell their fresh products directly in e-commerce market platform with newly developed packaging technology“
- “e learning“
- “Development of Protective Devices“
- “Production of face Masks Production of Hand sanitizers“
- “chemical formulations / manufacturing
- “Research and development of standardized herbal products“
- “supply of protection equipment“
- “New food products that meet standards, and which will be contribute meaningfully towards import substitution. Also, new opportunities of sale of agricultural produce to government feeding programmes.“
- “local water and wastewater management (clean water and sanitation (SDG N°6)“

Table 2

# Points raised during Q&A workshops October 2020

During the WAITRO Virtual Innovation Summit two workshops were conducted on Thursday 29th and Friday 30th October with in total more than 40 participants. The workshops were organized as Q&A meetings where participants were invited to ask questions and comment on the presentation “Meeting the changing conditions following the covid-19 crisis”. In addition, findings from the survey results presented in this report, were discussed. Key topics raised during the discussions were:

- The role of WAITRO members and associates in dealing with the repercussions of the pandemic. An urgency was expressed by participants for WAITRO members to position themselves as a vital part of the solutions nationally and as a collective internationally. This requires RTOs to identify relevant initiatives, potential partnerships and financial programs seeking to address relevant challenges raised by the pandemic or that have become even more apparent during the pandemic. According to core competences and technological capabilities, RTOs should prioritise solution developments to invest in and join partnerships to combine relevant capabilities with other strong business, public sector and R&D actors.
- Resilience of societies, regions and cities on the back of this pandemic and how RTOs can play a role. The pandemic has raised important questions around the resilience of societies in relation to healthcare systems, but also in relation to other aspects such as food security, safety, climate changes, environmental disasters, migration, etc. Again, RTOs have the opportunity to lead the agendas, emphasise the need for action, develop and demonstrate the solutions that will deliver improved resilience.
- The increased importance of local supply chains in periods where the global pandemic has disrupted the global supply chains and logistical infrastructure. It is uncertain what will happen with the global supply chains if and when the world returns to some level of “normality”. Probably global supply chain will continue to play a role, but to reduce risks of future global crises, it is already evident that large businesses are reconsidering and reconfiguring their supply chains to focus more on local supply and less on global supply. This is expected to become a permanent trend and will lead to local manufacturers seeking to improve their product development and technological capabilities in order to improve competitiveness and hence stay attractive to local customers in global competition.

- An example of a bespoke program developed and launched at DTI to help SMEs deal with the implications of the pandemic. The program introduces a lean and agile approach to helping SMEs reconfigure the business model and value added of small and medium sized enterprises. DTI with partners are currently delivering this service to 70 SMEs in Denmark financed by the philanthropic fund “The industrial fund”. Already, at pilot evaluation stage (after the first 15 SME advisory programs), the project has been found to benefit SMEs.
- Opportunities for international cooperation between WAITRO members and associates across continents to develop joint solutions to global challenges. EU and other funding agencies have allocated funds to support international projects across continents and under the WAITRO umbrella there are real opportunities to support consortia building that can respond to these coming calls to meet future challenges that are common across continents.

## Conclusion

Overall, according to the sample of respondents, many WAITRO members and associates, although strongly affected by the Covid-19, have found ways to dealing with the restrictions and changes in their markets. Around half of the RTOs, responding to the survey have developed new markets and are helping businesses develop new innovations.

Nevertheless, RTOs have experienced significant decreases in sales in certain sector markets and a significant proportion of RTOs are finding it difficult to gain business from new clients, and have seen average assignment sizes decrease compared to the period prior to the Covid-19 pandemic.

The covid-19 pandemic is also a window of opportunity where RTOs should seek the initiative and develop strengths either through partnerships or as individual RTOs to support the changing needs of local supply chains and meeting needs for increased resilience from public and private clients.

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