

Restart Cyprus

May 2020

A decorative network pattern at the top of the page, consisting of a web of thin grey lines connecting small square nodes. Some nodes are red, while others are grey. The pattern is dense and spans the width of the image.

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In the middle
of difficulty lies
opportunity.

Albert Einstein

A decorative network pattern at the bottom of the page, similar to the one at the top. It features a complex web of grey lines connecting square nodes, with several nodes highlighted in red. The pattern is more spread out and occupies the lower right portion of the image.



Preamble

Governments around the world are beginning to respond with various measures in order to restart much of the social and economic activity which came to a standstill in the past few months.

The Cypriot government has already produced a thorough strategy which includes a four-stage roadmap for the gradual lifting of the restrictions imposed, and for the restarting of economic activity.

At the same time, particularly for Cyprus, the socioeconomic impact of the pandemic has prompted an urgency to pursue a reform of various aspects of the economy. Many of these have already been identified through various studies but have, thus far, witnessed only moderate change, often being neglected due to the relatively fast growth rates in real GDP since at least 2015.

However, with the outlook of recession brought about by the pandemic, the need to focus on improving the economy's productivity and competitiveness is once more elevated. Once again, the key to success is linked to effective cooperation between the government and the private sector.

This paper outlines our thinking around various measures that could be pursued to achieve this combined objective, recognising that going back to the old-normal is not a viable option, and making the best of the new-normal is indeed the only option.

It also includes additional considerations, including our collective responsibility to adhere to health and safety measures, as we head towards a gradual return to normality so as to avoid the need to re-introduce stricter restrictions.

Introduction

Since the beginning of 2020, the COVID-19 pandemic has presented us with challenges such as we haven't had to face for a long time. Almost all countries in the world have shut down their economies to halt the spread of the virus. At present, over 80% of the global workforce, according to the International Labour Organisation, have had their workplace fully or partially closed as a consequence of the pandemic.

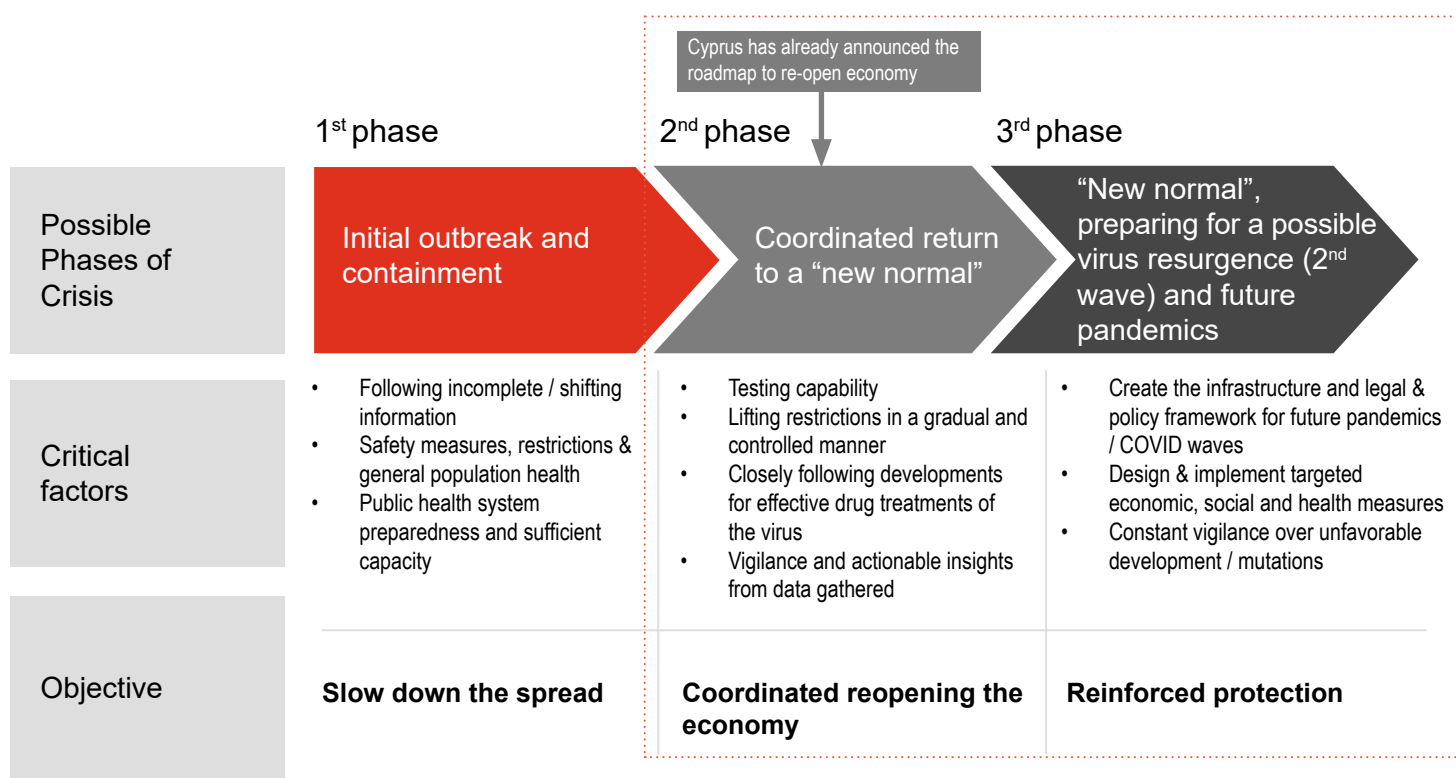
In Cyprus, early lock-down measures and widespread testing seem to have been effective in flattening out the infection curve, buying valuable reaction time, while the shifting of medical resources to fight COVID-19 has enhanced the resilience of our healthcare system at a time when this was critical.

This is not, however, the time for complacency. The difference between a success story and a tragic example hangs from a very fine thread and things can get really bad, really quickly.

In fact, this crisis and how it is managed can be described in three main phases which are explained further below and no country can emerge victorious until it has managed all three phases successfully. This is immensely important in order to be prepared for a potential second COVID wave.

Learning from the COVID-19 crisis and developing appropriate response mechanisms will also be very useful as the frequency and diversity of disease outbreaks are expected to grow considerably in years to come due to ongoing globalisation, urbanisation and climate change - as they have been doing for the past 30 years (Outbreak Readiness and Business Impact, World Economic Forum, 2019).





Cyprus is currently in the second phase of the crisis. The infection curve has flattened out, and after weeks of restrictions the Cypriot government has devised a thorough and coordinated approach to reopen the economy through a series of measures which gradually lift the restrictions in a controlled manner.

It is our view that for Cyprus to stay ahead of the game what is clearly needed is a **collective discipline to adhere to the health and safety guidelines** issued by the government which accompany the roadmap so as **not to risk a re-escalation of the crisis and even more severe economic consequences**. At the same time, we should now **start planning the third phase initiatives in parallel**. These initiatives are longer-term and more transformative and will ensure that the country will emerge stronger and more competitive from this crisis and will be in a position to handle future COVID-19 waves and new health crises without disruption.

Both the second and third phase measures involve extremely difficult considerations. A serious health crisis is never just a health crisis. It always has far deeper social and economic ramifications and that is why the "reanimation" of Cyprus should be well reflected and prepared.

With this paper we aim to contribute to this important discussion by making a number of **concrete proposals** to this end.

These proposals are addressed to the **government** and to the **business community** but in some cases by their nature it was not possible to distinguish in terms of where the primary responsibility lies. For the hospitality and leisure industry and the retail industry we also present specific proposals across both dimensions within the business community section.

In presenting these proposals, we have sorted them according to **three key fields of action (domains): Economy and finance; Social; and Health.**

There is also a brief list of international affairs initiatives pursuant to Cyprus' role as a member of the EU.

It is important to note that, despite classifying some propositions under one domain, many of these proposals are relevant across domains.

The next step would be to analyse and expand further on these measures, to assign priorities and to devise the actions necessary for their implementation.

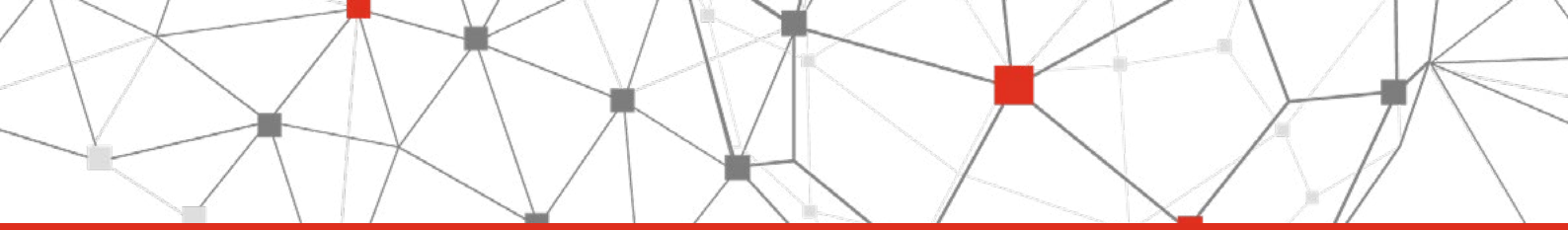


Contents

A. Economy and Finance	7
Government Propositions	9
Development and monitoring of health and safety guidelines to allow the economy to restart without compromise to health and safety	9
Increased and easy access to liquidity	9
Incentives for the development of composite real estate projects	10
Housing	10
Funds	11
Privatisation and disposal of state-owned assets	11
Targeted stimulation of the demand side through state-directed initiatives and programmes	11
Rapidly accelerate digitalisation and digital transformation	12
Intelligent management of capacities in close cooperation between government and industry	13
Fiscal and Tax	14
Business Community Propositions	16
Prepare supply chains and supplier portfolio for restart	17
Establish occupational health and safety measures in larger organisations and create inhouse medical structures	17
Rethink and adapt working together and interacting with customers	17
Create Incentives for flexible contractual and working time models	18
Strengthen cyber security	18
Hospitality and leisure	19
Retail	22

Contents

B. Social	24
Government Propositions	25
Ease restrictions step-by-step in a consistent and controlled manner	25
Promote pandemic-resistant cohabitation	25
Reopen schools in stages	26
Expand remote schooling and online formats suitable	26
Enhance expansion of web-based trainings to replace physical methods of delivery	27
Employ government-supported digital solutions for monitoring and tracking the spread of infection	27
Promote labour market digital upskilling / reskilling	27
Incentives for the development of Elderly Housing and Assisted Living concepts	28
Business Community Propositions	29
Provide flexible childcare options	29
Accelerate upskilling in areas that remain operational	29
Strengthen internal crisis communication within the organisation and expand digital cooperation	30
C. Health	32
Build surge capacity and ensure better use of available capacity	33
Re-design the role of the retail pharmacy	36
Use proven digital health technologies & analytics	37
Enable & reinforce the role of the MoH's public health team	40
D. Other Initiatives - International Affairs	42



Detailed Propositions

A. Economy and Finance

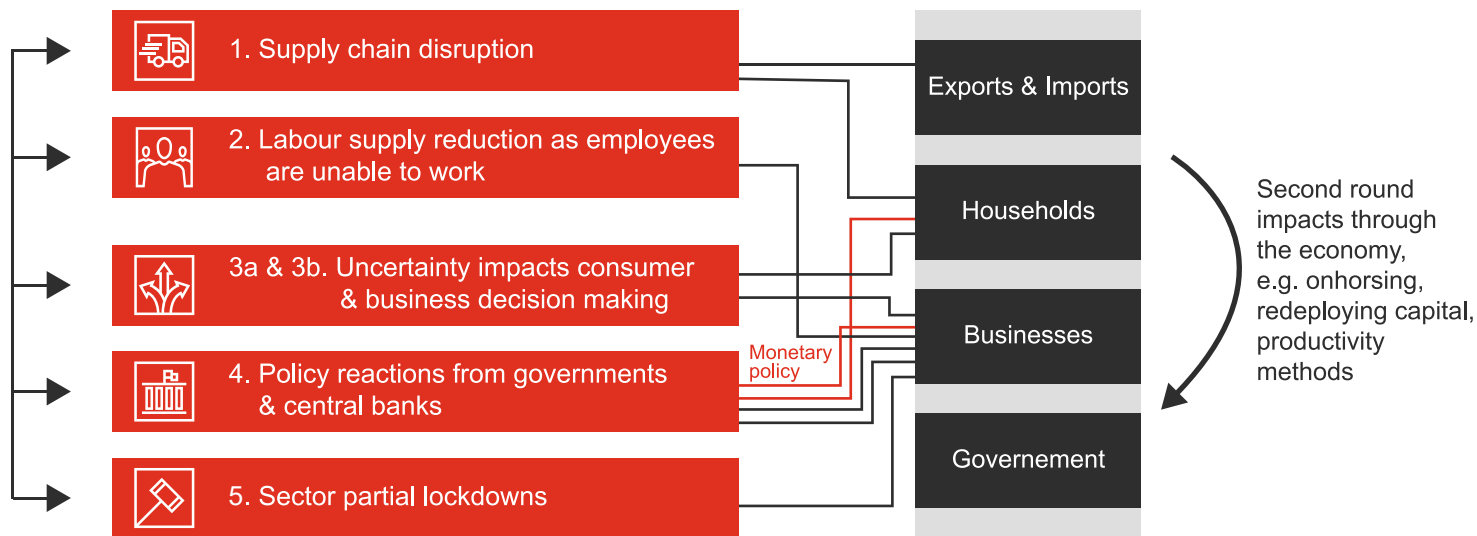
The economic and financial challenges imposed by the coronavirus crisis are putting immense pressure on organisations, both governmental and private, and there is no playbook or set of rules to help navigate through them.

According to PwC analysis, the main challenges affecting the economy, caused by the COVID-19 crisis, can be summarised under the following five areas:

- Supply Chain disruption;
- Labour Supply;
- Uncertainty which impacts consumer and business decision-making;
- Policy reactions from governments and central banks; and
- Sector partial lockdowns.

The disruptions caused by these challenges are affecting households, businesses and the government itself.

At the same time, existing productivity and competitiveness challenges are becoming even more apparent.



Source: PwC

We believe that a number of government and private sector initiatives should be structured around these challenges and, while for some short-term period, survival is the first agenda item as we navigate the crisis, simply tweaking government and business models is not enough. The new normal, whatever that may be, will require a deep rethinking of the way governments and organisations will be operating. While it is impossible to know what will happen and what the new normal will be, it is possible for Cyprus to utilise its own past experience and other examples in order to devise its response.

The financial crisis of 2013 was a much different kind of crisis requiring different solutions to the current one. However, Cyprus can draw from the positive experience of how the government and private sector worked together to respond to the past crisis. At the same time, lessons learnt from the response of other territories are always useful to help think constructively about the future.

According to PwC's CFO survey of 24 April, 62% of the surveyed organisations in Cyprus believe that they would get back to "business-as-usual" within 3 months if the COVID-19 crisis would stop now. However, our opinion is that both businesses and the state should not remain complacent to what they consider

the 'old normal' and they should instead utilise this crisis as an opportunity for transformation towards more digitally-enabled, sustainable, and crisis-resilient economic, business and societal models.

We believe that crisis responses and planning should focus into **Government Propositions** and **Business Community Propositions**, with coherent but separate plans and lines of responsibility for each, and decision makers should be empowered to act. By being proactive, we are responsible for shaping and developing a new normal which we are fully prepared for and we can emerge from this crisis transformed for the better.

Many of the actions taken during the three phases overlap and evolve over time. For example, the crisis management team set up in the first phase will continue to function as conditions stabilise, because there are likely to be new crisis situations. It is also necessary to remain focused on financial concerns, tax, and supply chain operations across all three phases. Businesses, such as in the hospitality and leisure industry, whose operations are affected by the situation in different territories will find that their responses will change depending on the measures that other governments are taking to address the crisis, such as due to stricter restrictions on travel but also due to the extent of economic recession affecting those territories.



Government Propositions

1. Development and monitoring of health and safety guidelines to allow the economy to restart without compromise to health and safety

To make the situation as simple as possible for businesses, the government has begun to provide guidelines to cover both occupational health and safety in the workplace (e.g. protection of risk groups) and requirements for opening up sales areas to the public (e.g. distance regulations, specific opening hours for risk groups and hygiene regulations, such as the obligation to wear protective masks and gloves). At present, these guidelines cover the needs for the first two stages of relaxation.

These guidelines will need to be continually revisited and adjusted in collaboration with epidemiologists and public health specialists, including guidance issued by international bodies.

It is therefore necessary to create the necessary capacities in the various different government bodies to provide this guidance on a timely basis but also to be mandated at short notice to monitor the measures effectively. The latter is particularly important in order to ensure that the risk of resurgence is managed to the extent possible. While the guidelines for an immediate restart have been set, it is also important to critically question the resilience of every organisation in order to be properly prepared for the “management of a second wave”.

2. Increased and easy access to liquidity

Beyond the short-term measures which have already been implemented by the state, further medium-term measures are needed, including the anticipated state guaranteed funding scheme as well as grants. To deliver this, the involvement of the banking sector is required for which further supervisory-relaxation measures may be necessary.

What is of particular importance however is also the speed at which liquidity can be channelled through the economy. Traditionally, the ability of banks and the state to deliver in this area was relatively slow. There are now various solutions that can be adopted, incorporating new technologies and outsourced functions which can accelerate these processes.



3. Incentives for the development of composite real estate projects

Such projects have a multiplier positive impact on the economy and support sustainable growth. Therefore, incentives should be provided for the development of composite projects, in line with the demographic and other demand factors, that have a multiplier impact on the economy. Such projects could include among others, Affordable Living (see next point), Assisted living for elderly or for people with health problems (further expanded later-on), Education and student housing etc. These projects should include, in addition to the real estate component, other uses and facilities such as retail space, health centres, recreation areas etc which will help other sectors of the economy, having in this way a multiplier positive impact on employment and the economy at large.

Incentives for such projects could take the form of additional building density, tax incentives both for the investors and the buyers/users, relaxations etc. Projects that fall in this category should also have a priority in terms of licencing given the multiplier effect that these projects could have on employment and the economy. Finally, similar incentives should also be provided for projects that are friendly to the environment and promote the sustainable development of the country.

4. Housing

No matter how well the COVID-19 economic consequences are handled, inevitably there will be an impact on household income. Housing is an area where there are already imbalances, and which is likely to be directly impacted by reductions in disposable income. While the “Estia” scheme was designed to handle past defaults, there were still a significant number of borrowers who, even with government assistance offered by the scheme, were not able to sustain the ownership of their existing property. This particular problem, as well as potential new defaults involving housing loans will need to be addressed.

This is an area where government-led solutions (albeit with possible participation of the private sector, such as the banks and insurance companies) may become critical in how the consequences are handled. Example solutions include, rent-to-buy or shared ownership schemes for affordable housing, as well as incentives in the form of building density in exchange for setting a moratorium on selling prices.





5. Funds

Funds are considered as an alternative way of financing and as businesses' financing needs are likely to increase globally, it is appropriate to create incentives so as to make the establishment of funds and their operations locally (fund managers, fund administrators, custodians, etc.) more attractive but also so that to encourage overseas funds investing directly into Cypriot businesses.

While progress has been made here, the pending items of legislation (e.g., fund admin law, partnership law) should be accelerated as well as improvements in the efficiency of regulatory processes to increase capacity to handle the volume of applications. Where possible, tax incentives should also be offered so as to attract local investments through Funds.

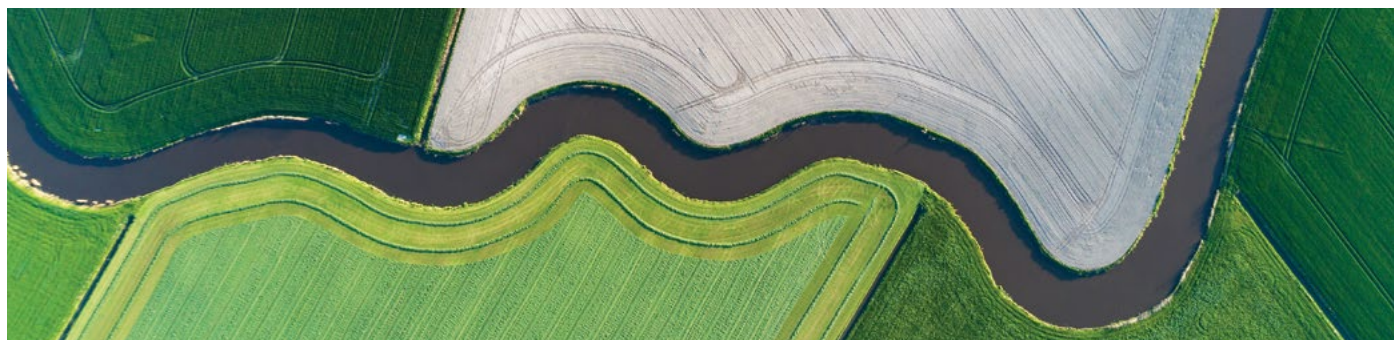
6. Privatisation and disposal of state-owned assets

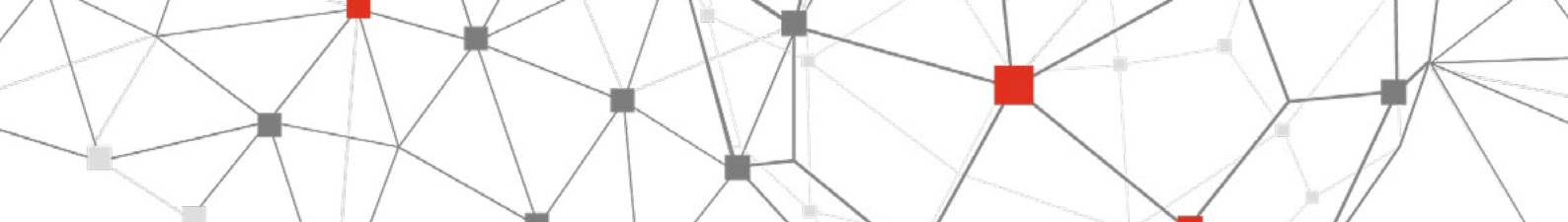
The government can attract inward investments via a reignited privatisations programme (lottery, extension of concessions such airport, marinas etc, minority disposal of CYTA, disposal of KEDIPES loans especially performing loans and Real Estate which are in the order of Euro 1.1 billion and Euro 600 million respectively, sale and lease back of government-occupied buildings possibly through the setting up of a specialised fund).

7. Targeted stimulation of the demand side through state-directed initiatives and programmes

Demand may be stimulated in the short term through targeted financial incentives, for example through programmes to promote mobile working (e.g. by reducing VAT on IT infrastructure and internet connections, or through flat tax rates for activities in the home office). This also includes the expansion of broadband in structurally weak regions in order to create the conditions for comprehensive mobile and remote work. If these programmes do not take effect, Cyprus faces the risk of not generating sufficient demand when the boost of the economy sets in, thus shifting consumption decisions into the future despite falling prices.

Additionally, the government could consider tax incentives for local and international businesses that continued to pay their taxes and who did not seek state support during this period and who have funds available for investment. These incentives can be linked to investments in selected priority industries, linked to increased digitalisation of the target businesses. Specifically, for retail businesses, to encourage demand, the targeted measures could involve the implementation of temporary tax incentives in relation to e-commerce and logistics. Such a measure would boost consumption through digital channels, while enhancing employment in the logistics businesses.





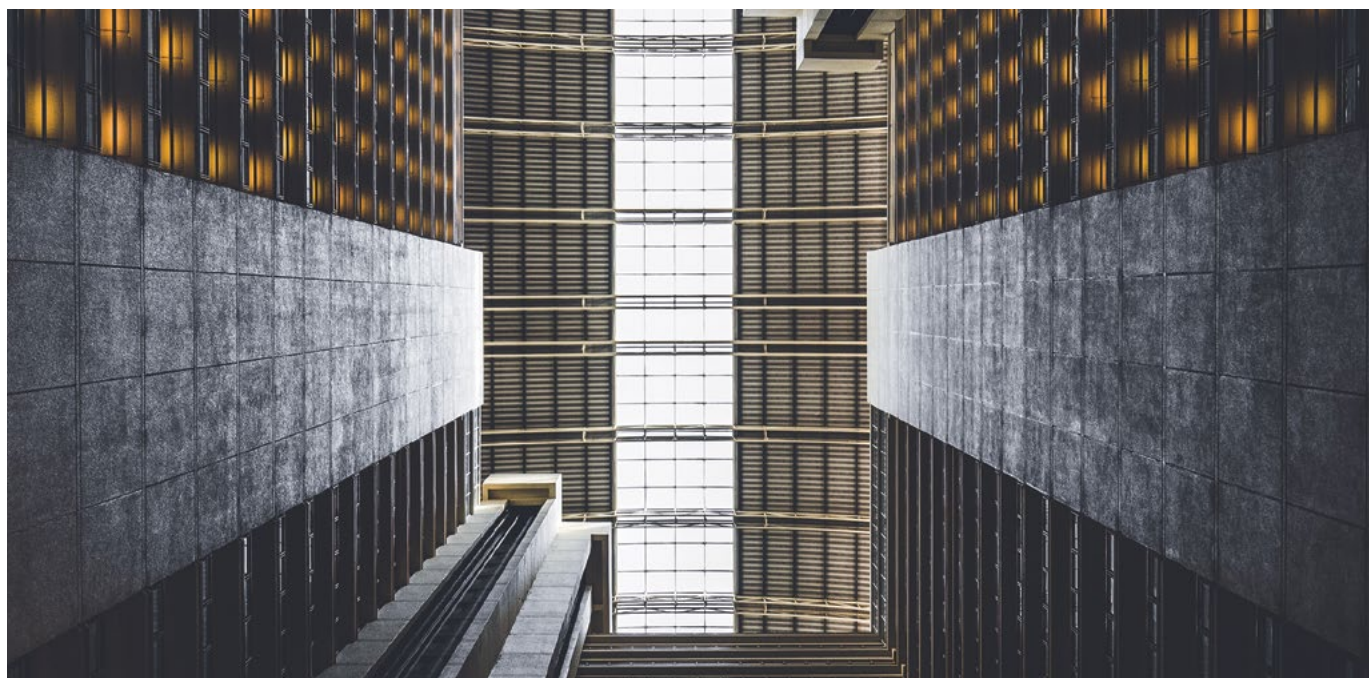
The above measures could be available for the sector as a whole or could be targeted to specific segments of the sector (e.g. SMEs, segments of the sector that were impacted the most by COVID-19) to promote faster demand equilibrium. The latter can be achieved through a strategic plan by setting up appropriate, transparent, and fair eligibility criteria, that can be linked to specific metrics such as impact on revenues and number of employees.

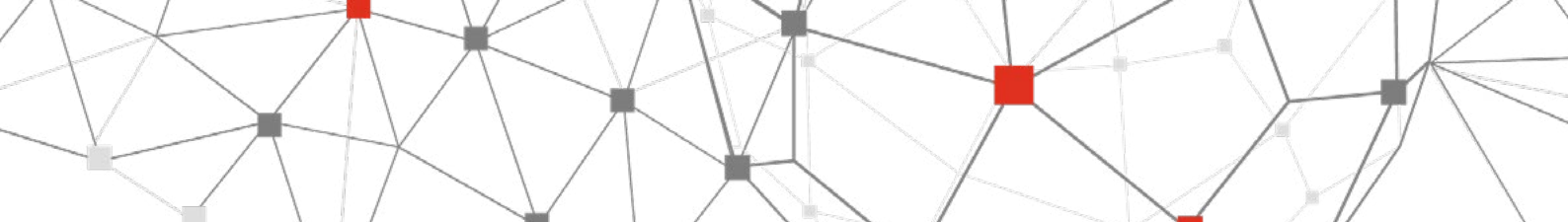
The gradual reopening of specific sectors should be based on relevance in terms of economic and social aspects and on the ability to maintain hygiene / distancing measures. The municipalities play an important role in supporting this restart, as many of the businesses are often too small to implement the measures (reporting system, infection control, etc.) themselves. Finally, government investment / spending on infrastructure projects should not only continue but should increase by expediting implementation of plans for the projects that have already been identified.

8. Rapidly accelerate digitalisation and digital transformation

A coordinated effort to accelerate the digital transformation of the public and private sectors is now critical, continuing on actions that have already been undertaken but, by offering financial incentives, aiming to advance the effort further. Additional measures could include incentivising private companies to offer solutions for the public sector through alternative remuneration practices. Where state grants will be offered then these should be linked to clear plans to restructure / upgrade operations to more “competitive” technologies / processes. Time-consuming bureaucratic procedures with manual checks could be quickly replaced digitally so that organisations and, in some cases, employees themselves can easily deal with repetitive administrative tasks while working on reduced hour schedules.

There are already various possibilities (robotics process automation, chatbots, digital online assistants, video chats, etc.), which should be implemented as soon as possible.





Such digitalisation initiatives will not only increase efficiency in services while the workforce is working on a reduced gear but can also provide a wider economic benefit.

For example, currently executing a transaction of immovable property at the Land Registry is a time-consuming and cumbersome procedure. There is a high administrative burden and inefficiencies involved when dealing with the various Local Authorities and Land Registry functions, as regards settlement of municipal charges, granting of tax clearances, payment of transfer fees etc. The COVID-19 outbreak and the restrictions imposed, further highlighted the need for consolidation and digitalisation of these procedures.

Digitalisation would simplify the transaction process and reduce costs for all participants. At the same time, it would also enhance transparency, making the Cyprus property market even more appealing for foreign investors. Digitalised and more efficient processes would slim down operating costs for financial institutions and servicers, reducing the burden of the management and handling of large real estate and loan portfolios.

Implementation of a centralised Leasehold Registry, through which landlords will be required to register lease agreements of privately owned residential and commercial properties in Cyprus and to update such information on an annual basis. This would complement the sound Land Registry system, providing elevated transparency not only in terms of the registered ownership of immovable property, but also in terms of the use and occupancy.

Maintaining transparency is increasingly important for the real estate market, a sector which continues to attract a growing allocation of capital from foreign investors. The proposed mandatory registration process would also serve to alleviate tax evasion on rental flows, primarily in the private housing sector.

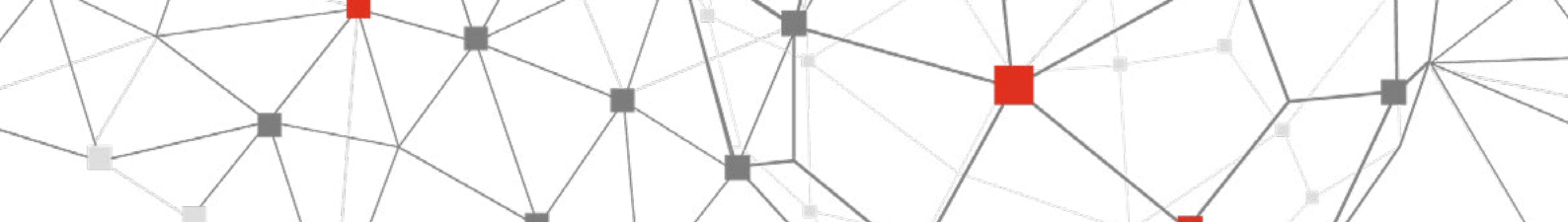
9. Intelligent management of capacities in close cooperation between government and industry

For any kind of infrastructure, the state could set new standards on an epidemiological basis. This can initially lead to further restrictions and bottlenecks (e.g. access restrictions adapted to the time of day at traffic junctions, at public authorities, in retail trade or in production facilities).

At the same time, this results in a need-to-manage demand. One can think here of the increasing utilisation of local transport capacities due to the gradual resumption of economic activity, but also of the demand for certain (COVID-19 independent) health services. The consideration of risk groups and regional infection levels requires a complex interlocking of restrictions and target-group-specific measures. It is up to the government at various levels to manage these capacities accordingly. It is best to closely involve business representatives as well as setting up steering committees that are responsible for decisions and have access to detailed real-time information. Special attention should be paid to the further protection of these and all other sectors critical to the system, especially during the phase of gradual return to normality.

In this context, particular attention must be paid to three essential fields of action:

(1) flexible overarching capacity management in public (and private) infrastructure provision, as demand for health, transport or utility services will react according to dynamically adapted constraints. At the same time, it (2) will be necessary to straighten out central infrastructure and supply systems in order to be able to adapt more flexibly and quickly to specific local needs and situations. The only way to achieve this is, if (3) testing, control and hygiene measures are installed on a large scale in public areas and businesses, in a coordinated and harmonised manner.



A higher demand for infrastructure services then goes hand-in-hand with corresponding mitigating measures or the addition of other infrastructure capacities, e.g. a special frequency of local traffic-control systems for passengers, opening up of additional supply units or the spatial division of certain groups of people in buildings.

Various infrastructure providers are currently suffering financially, caused by a lack of customers, lost revenues or limited production capacities. Only substantial bridge financing used to maintain these critical structures (e.g. local transport providers) will enable the economy to start up again. In principle, it is also necessary to examine the infrastructural, material and personnel security reserves (if any) available for disaster situations.

In the energy sector, appropriate incentives can lead to acceleration in the development of renewables, while utilising the local construction and engineering resources. Further review of measures linked to the development of the oil and gas infrastructure (service facilities for idled drilling platforms and support vessels) can also position Cyprus as a regional hub.

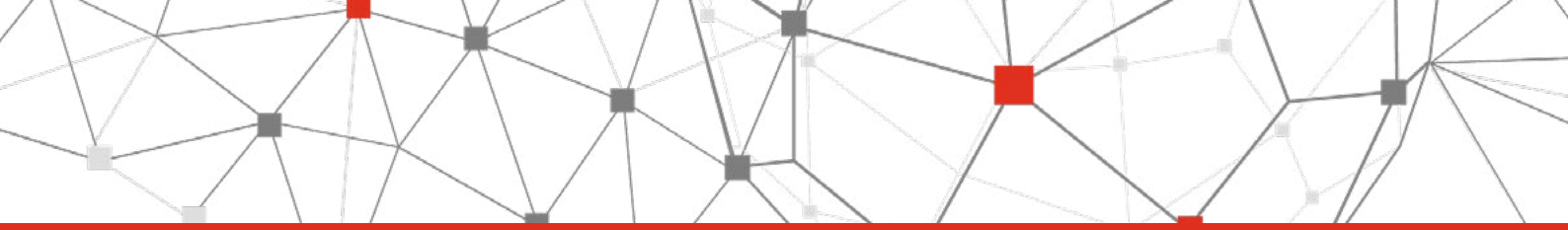
In the agriculture sector, incentives to introduce technological upgrades as well as more eco-friendly approaches can improve competitiveness and positively impact exports while reducing dependency on imported produce. These incentives should be linked to efforts to foster innovation and digital transformation. However, it will also be necessary to facilitate the development of an efficient infrastructure (distribution and export solutions) that can support the competitiveness of this economic activity.

10. Fiscal and Tax measures

The new normal requires actions and investments to be taken, both by the government and the private sector. The government will have an extra role through its fiscal and taxation policies and practices to encourage spending and investments which will be necessary to (1) comply with the new “Health & Safety” requirements of doing business (2) to help direct where new investments need to be made, (3) encourage its citizens to become digitally enabled, within the existing Fair Competition rules but also within any concessions the European Commission may be willing to make under the circumstances to bring countries up to the required levels.

A mini tax reform, along the summer 2019 proposals by the Ministry of Finance, as amended to improve the proposed package but also add new dimensions which are now required would probably go some way to achieve that. The proposed additional measures could include some of the following measures:

1. On certain predetermined spending / expenses / contributions / investments (e.g. disinfection expenses; technologies; digital upskilling; donations to relevant R&D) consider
 - a) Tax deductibility at more than one times the expense;
 - b) One off investment allowance; and
 - c) Carry forward of losses beyond the current five-year tax period period, and/or carry back of such losses;
2. To facilitate mergers and acquisitions in particular industries/investment to convert existing use to required use/direct investment in certain sectors e.g. Housing for the elderly; consider
 - a) all those covered under the first initiative above;



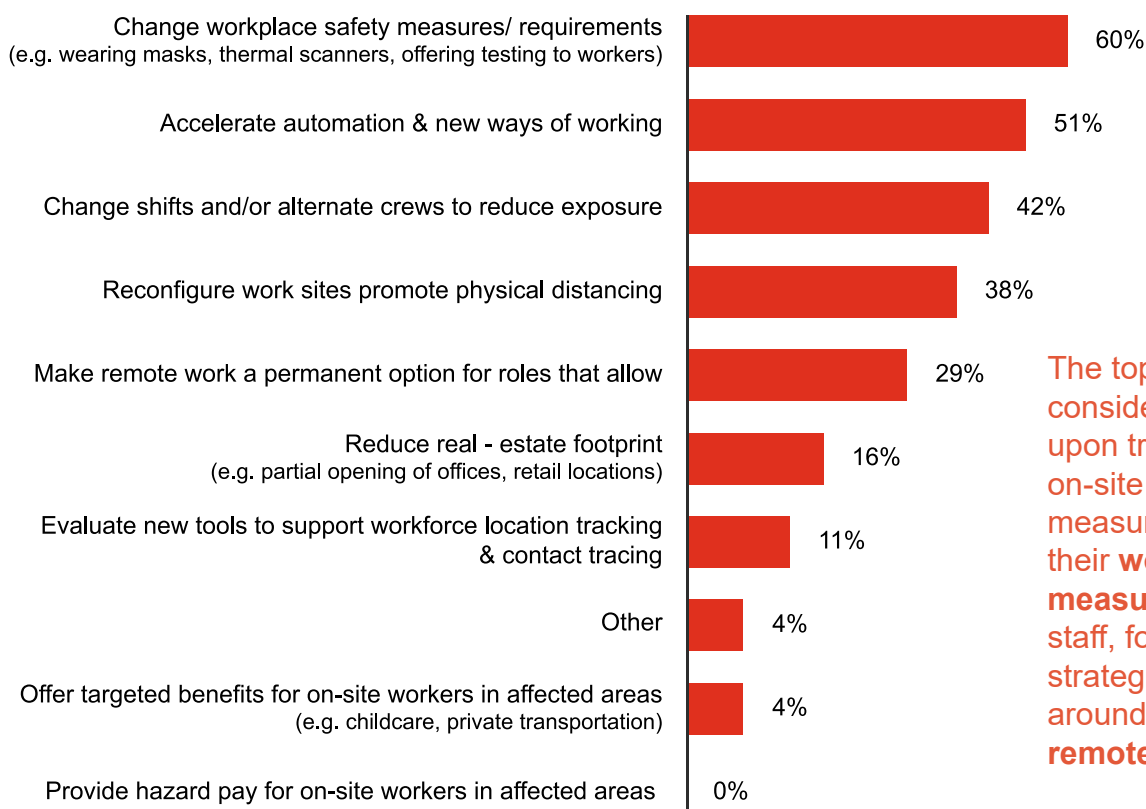
- b) tax holiday or reduced tax rates for a period of time or certain level of income up to a threshold exempt; and
 - c) tax holiday or reduced tax rates for period of time where a building is used by the government as a hospital;
3. Consider reintroducing exemption from Capital Gains tax for immovable property acquired during the calendar year 2020 and possible 2021;
 4. To facilitate the digitisation of households, allow a personal deduction of fixed amount per annum provided relevant household “band width” are of a certain requirement;
 5. To attract relevant talent in Cyprus consider extending and/or expanding the current personal tax exemptions provided for newcomers to the Cyprus labour market;
 6. To help businesses - allow for tax losses of 2020 and possibly 2021 to be able to be carried forward beyond the five-year period;
 7. Abolition or Suspension (for a period of time) of Deemed Dividend Distribution Rules - As businesses are required to keep cash and profits in the business and reinvest to digitise etc, the measure of paying taxes on a deemed distribution should be abolished and more reinvesting provisions (e.g. Notional Interest Deduction) could be strengthened;
 8. To help with R&D in Technology
 - a) Any clawback on the wear and tear claimed on intellectual property should be abolished; and
 - b) Tax credits on R&D;
 9. To help cash flow allow for deferment of input VAT on imports. Import VAT to be accounted for through the reverse charge provisions in the VAT return instead of having to be prepaid at customs. This can be a short-term or a permanent measure;
 10. Create a level playing field for manufacturers of products used in the construction industry such as aluminium products - Extend the application of the reverse charge provisions to sellers of goods used in the construction industry. This will create a level playing field between industries operating in Cyprus and those operating in other EU member states and the occupied area in Cyprus;
 11. Extend the option to tax (impose vat) on commercial properties beyond to properties leased to businesses carrying out operations subject to VAT in excess of 90%. Should be an option of the owner of the property. Existing rental agreements to be exempt from this until their expiry; and
 12. Allow recovery of input VAT on sale and/or lease of saloon cars to businesses when (and to the extent) such cars are used for business purposes. Will be beneficial for the tourism industry as it may facilitate the renewal of the fleet of car leasing companies. It also eliminates a tax disadvantage faced by businesses in Cyprus (may be more applicable for businesses setting up headquarters in Cyprus).



Business Community Propositions

According to PwC's CFO survey regarding the response of Cyprus Businesses to the COVID-19 crisis, organisations in Cyprus are already putting plans into place for responding to the challenges imposed by the crisis and for transforming into more prepared and more resilient organisations for dealing with the new normal after the first crisis wave passes. The plans being put into place are firstly around employing workplace safety measures, as well as transforming into more digitally enabled organisations to support remote working, automations and establish more hybrid models of working. We present below our survey's detailed propositions in the form of initiatives to manage and monitor the current situation while simultaneously preparing for the new start.

What companies are planning to implement once the transition back to on-site work occurs



The top two measures considered by CFOs upon transitioning to on-site work are tactical measures to change their **workplace safety measures** to protect staff, followed by more strategic measures around **automation and remote working**.



1. Prepare supply chains and supplier portfolio for restart

Supply chains in critical industries should be tested and prepared for restarting at an early stage by means of a trial run. In addition, an up-to-date overall picture of all suppliers and supply chains is needed in order to be able to react more efficiently to changes on short notice. Existing non-documented processes for stockpiling critical goods should be drawn up to make it easier to cope with any possible new disruption. Checking the resilience of the value chains as well as the supply chains in terms of a mandatory stress test could become a fundamental component of future business models. In the **pharmaceutical** industry, for example, measures towards improving the access to overseas export of pharmaceutical products need to be explored.

2. Establish occupational safety measures in larger organisations and create inhouse medical structures

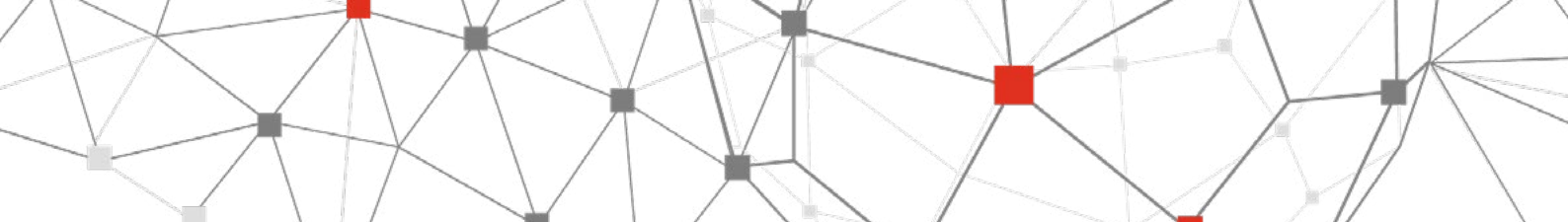
It is essential to adapt occupational safety measures to the COVID-19 pandemic. This involves access controls to limit the number of people in a building, mandatory fever detection, the control of room occupancy rates, or the use of health apps on work-mobile phones in order to protect staff and customers, especially risk groups, as best as possible. In addition, isolation facilities may be set up in these organisations, so that employees can be physically separated from the rest of the workforce if necessary. Organisations can also help to procure testing to determine whether someone is infected or already developed antibodies. This requires appropriate in-house medical structures, which should be created if not already in place and which may be delivered through collaboration with external

healthcare providers. Clear responsibilities and dedicated contact persons are particularly important in occupational health and safety, as they are responsible for offering medical care where it is needed, for example in the canteen, the “open space” office or at the assembly line.

3. Rethink and adapt working together and interacting with customers

Where physical presence is required, adjustments are inevitable. Many organisations are already working intensively on short-term changes. These changes concern:

1. The infrastructure in the organisation. Workplaces, staff rooms, canteens, conference rooms, etc. have to be redesigned, so that the prescribed distance can be maintained;
2. Concepts for staff scheduling, so that fewer people are in a room at the same time, such as the rotating use of office space or the grouping of employees (Team A, Team B). The topic of working from home is on top of the agenda again: however, home office strongly influences the corporate culture and must be accompanied in parallel and with a high degree of integration. Models of virtual breaks, online leisure activities and sports programmes should become an integral part of corporate culture. There have already been major changes in customer interaction; and
3. Even when the restrictions are gradually relaxed, they will remain in place for a long time to come. This applies, for example, to the visitor density on shop-floors (example from Austria: reopening with max. 400 sqm sales area, one customer per 20 sqm, entrance controls), the recommended or, where appropriate, compulsory wearing of masks, the provision of disinfection



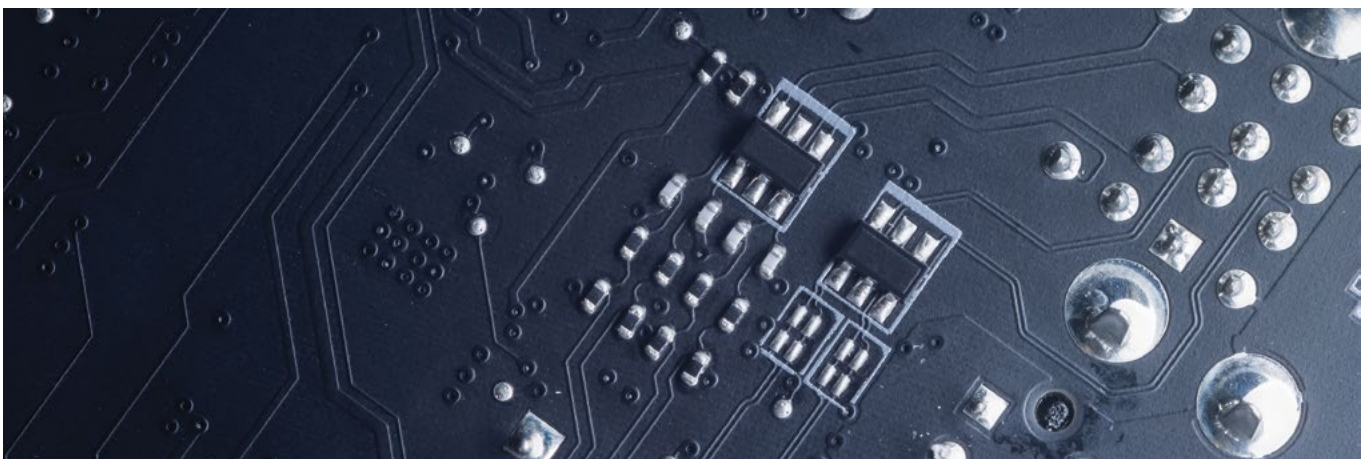
facilities, greater distances in restaurants or the increase in “take-away” offers. These measures are necessary in order to enable retail and food and drink businesses to restart their operations and to prevent or absorb existential crises of entire industries. For this purpose, tailor-made and industry-specific procedures have to be developed, especially in medium-sized businesses (e.g. hairdressing salon versus retail trade). In the banking sector, institutions could temporarily extend the opening hours of branches to customers to meet increased demand for services that are expected with the relaxation of measures and the restrictions imposed by social distancing rules. Such initiatives could be supplemented by digital channels and through the streamlined processing of credit applications, leveraging technology that is already available through fintech solutions. Related to the latter, interestingly, through the “lock-down”, customers were in fact able to adapt to on-line / mobile banking much faster than previously anticipated. So what the new normal calls for is not a different strategy to what most financial services have already identified but rather the accelerated implementation of the strategy now that the barriers to change are de facto lifted.

4. Create incentives for flexible contractual and working time models

As the restart is likely to be gradual and in waves, interactions between different sectors and areas of society need to be taken into account. As schools are closed and, at least in part, will possibly remain so for a longer time than individual sectors, employees with children continue to need flexible working time models. This is also necessary, as in the event of new infections entire classes may have to be sent back into quarantine.

5. Strengthen cyber security

The rapid shift of work to the home has led to additional threats caused by cyber-attacks such as phishing and spam. It is therefore necessary to carry out continuous assessments in order to identify and ward off attacks at an early stage. To meet the increased requirements, the appropriate IT infrastructure and a suitable cyber security architecture are required. Since 90% of successful attacks are caused by human error, it is also important to be aware of the short-term necessity to improve the skills of employees through internal information campaigns and training.





6. Hospitality and leisure

With prolonged uncertainty around the timing of the complete eradication of the risk posed by COVID-19 the hospitality and leisure industry participants are now faced with the dilemma as to whether to drastically adapt through immediate actions or to risk remaining idle for time to come.

In order to avoid remaining idled, the industry needs to demonstrate prompt innovative adaptability at a national scale. It is necessary for the solutions to be introduced to be designed through a co-creative process involving the government, local authorities, industry associations and the private sector. This way there will be consistency and discipline in the standard of service to be offered which will therefore add to the national brand, creating a new culture of “philoxenia” that puts the health, safety and comfort of the guests to the heart of the services offered. Such a statement would be particularly impactful, capitalising further on Cyprus’ successful handling of the health aspects of the COVID-19 pandemic to-date.

While some actions may only be needed for the short to medium-term, the process of going through the innovative adaptability will equip the industry with much needed skills for transformation and resilience.

In devising the innovative action plan there are a number of considerations and we list some of them here:

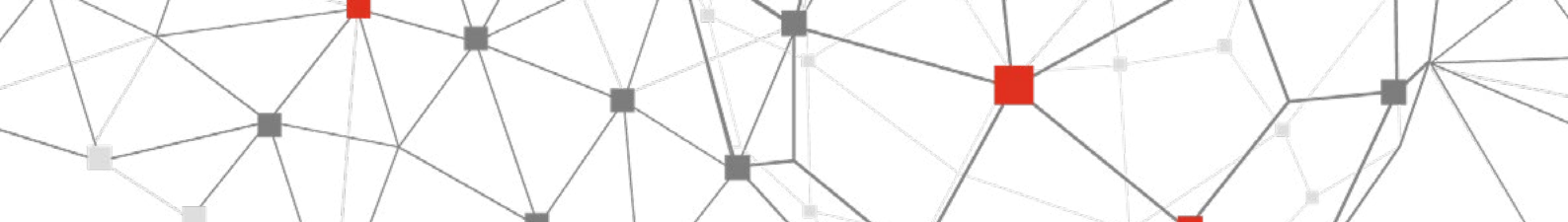
1. Cyprus lends itself uniquely to open-air dining and entertainment. From May to end of October if not for longer. This means that the inevitable measures which will mandate only the use of outdoor facilities for sitting areas in restaurants and bars can play to the advantage of Cyprus as a tourist destination as unlike other places in Europe this is something to which the industry can easily adapt. Beyond the privately-owned grounds for such facilities, there is the possibility for local authority / state-owned spaces to be used in the same way (village squares, pedestrianisation of roads, etc.) so that to increase outdoor sitting capacity;
2. Hotels will need to gear up to be able to offer extended room service facilities as some guests may feel more comfortable to choose that over the common dining areas. This has implications on the menus to be offered but also the running of the hotels’ catering facilities since buffet catering is unlikely to be able to be offered at the scale that traditionally was. At the same time, this higher quality service will inevitably justify a higher rate product;
3. Innovative balcony-dining solutions overlooking live entertainment events offered on the hotel grounds may also present a nice alternative to the traditional service. It is very likely that there will be adequate choice of entertainment solutions given that for many artists the option for concerts will not immediately be available;
4. Utilisation of large open spaces for drive-in open-air theatres, concerts, cinema;
5. Beach facilities will also need to be adapted – to create more capacity over larger areas given the need to reduce density. There could also be innovative technology solutions around reserving and pre-paying for the beach facilities with restrictions on time that could be used so as to allow more people to visit;
6. In order to further decongest the hotels and sea-side areas but also in order to promote further the other sites that Cyprus has to offer a solution could be to offer more competitive car-rental to tourists together with an app which would encourage tourists

(both foreign and local) to visit alternative destinations and have authentic Cyprus experiences along the way. This app would need to be quickly developed and endorsed by the Ministry of Tourism for maximum impact. An idea for such an app could be a loyalty scheme which would cover certain village routes, encompassing traditional accommodation, restaurants, and products/services along these routes (e.g. bicycle rides, visits to donkey sanctuaries and wine producers etc). The tourists can gather points - when they visit places, share their stories, and advertise on social media - which they can then cash out in other establishments during their stay in Cyprus. In the shorter term, it is anticipated that domestic tourism could aid to moderate the high impact on the sector for 2020. Nevertheless, this may need to be promoted and incentivised through reduced fees to locals and extended leave (either through utilisation of leave from future periods or through the promotion of unpaid leave) during the summer period;

7. The villas and self-contained apartments present a great opportunity for holidays while under the restrictions that are likely to remain in place. To upgrade further this product, government incentives can be offered to refurbish such properties but there also needs to be investment in the supportive infrastructure such as catering services, grocery delivery services, laundry and cleaning services, pool cleaning, etc.;
8. A wider marketing plan needs to be introduced promoting amongst others, early bookings through “early bird discounts”, state guaranteed vouchers for customer prepayments for missed vacations in 2020, promotions for booking of vacations through dedicated local platforms;

10. The state can offer incentives to those industry participants that choose to operate as long as they adhere strictly to the guidelines and undertake the initiatives required to adapt their product offering. This way the encouragement is to adapt and contribute positively to the economy rather than to stay idle; and
11. A ‘COVID compliant’ scheme could be set up and run by the state where organisations (under various categories such as hotels, restaurants, beaches etc) can be assessed and monitored to ensure that they meet all relevant COVID health and safety measures. The ones who do, will enter a list which will be advertised on the the dedicated national-COVID-19 website and other forums. This way the state can enforce compliance and at the same time they create and disseminate valuable communication and navigation in a time where customers need it most.

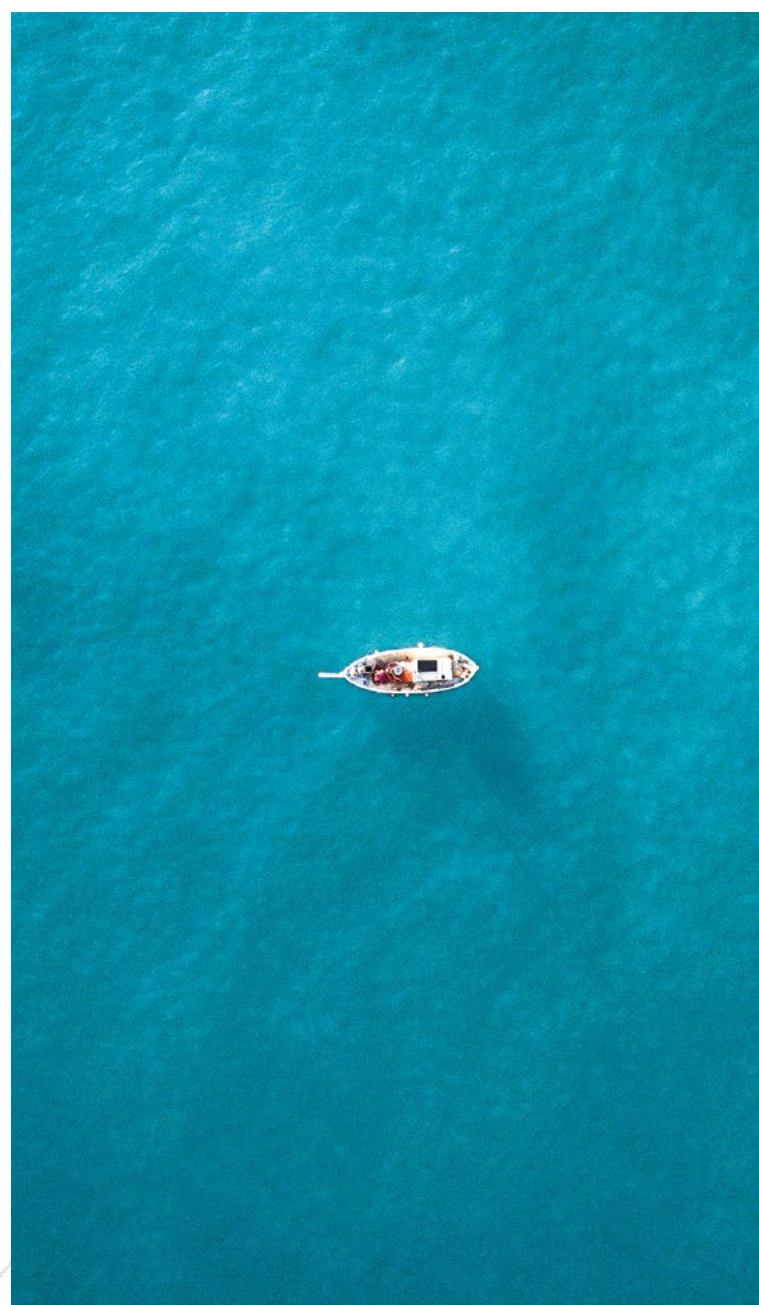




The below actions are prerequisites that define the success of the initiatives to be undertaken:

1. Clear guidelines on health and safety and standards of service to be issued by the authorities;
2. Solutions around guest and staff health assessment and contact tracing are even more critical for the operation of this industry - this can be part of a broader national solution or bespoke for the industry but in any case, should be put in place immediately;
3. Industry participants should respond to the challenge responsibly and with consistency. They should accept that the current situation will lead to lower occupancy and need to compromise on revenues;
4. Proactive engagement with the tour operators is necessary so that they can also contribute with insight as to guest expectations but also so that they can be part of the solutions to be offered;
5. Visible monitoring and enforcement of regulations will be required, instilling confidence in the guests and therefore also contributing to the brand;
6. Timely action by all involved; and
7. Co-ordinated communication and marketing led by the government and consistently reinforced by the industry participants. This may also include bilateral arrangements with other countries to promote each other. There should also be clear reference in the communication as to the health system's ability to handle COVID-19 concerns building on the positive track-record to-date.

Overall, through this crisis there is a unique opportunity for collaborative effort to accelerate the transformation of the industry and to upgrade and diversify our tourist product, creating a new identity for Cyprus as a tourist destination of high quality "philoxenia".



7. Retail

The retail industry has had more time to adapt to the new normal while it also lends itself to a more flexible operating model than the hospitality and leisure industry.

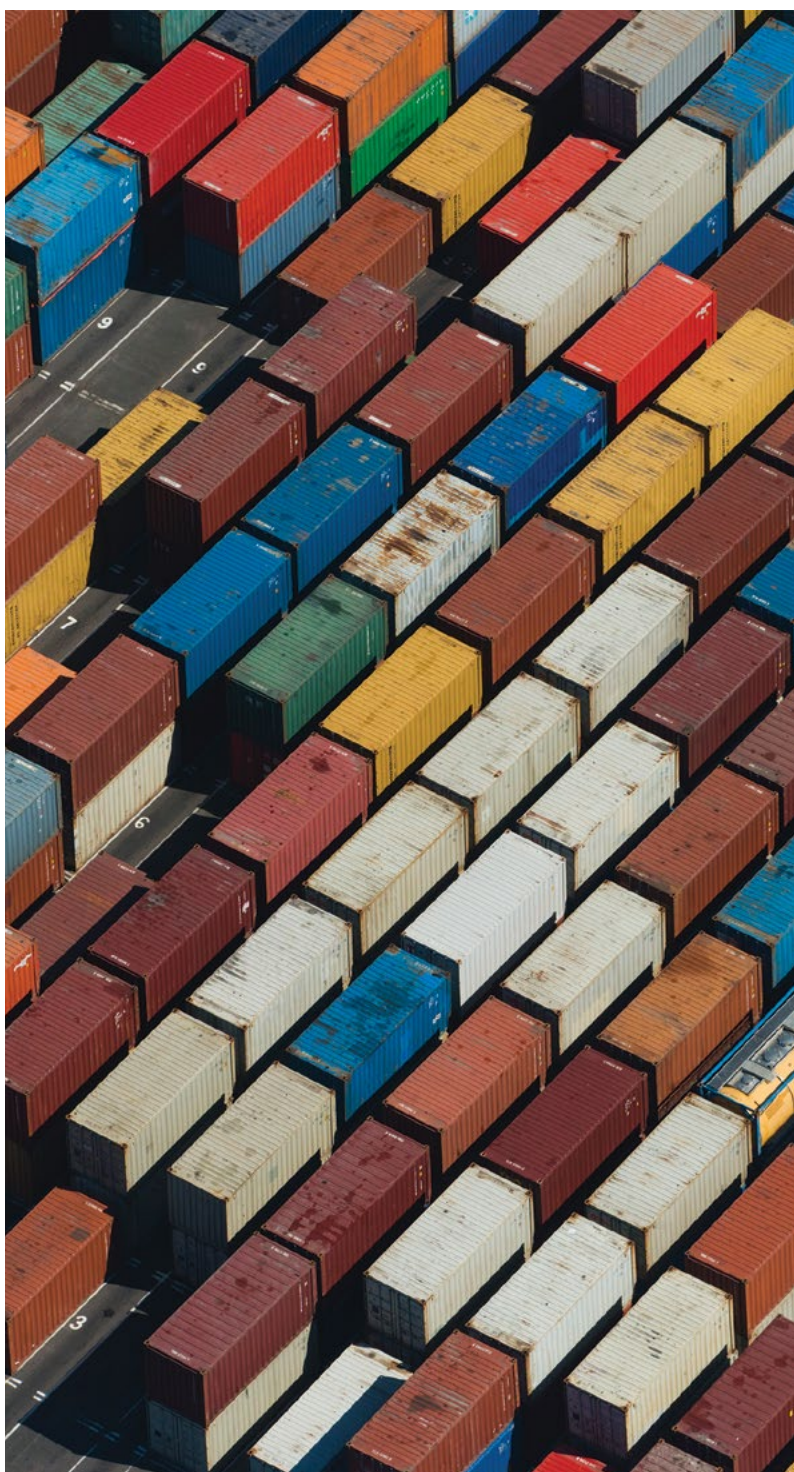
However, while there were quick actions to introduce on-line ordering and delivery across many businesses, the standard of service requires a significant upgrade in order to sustain this offering for time to come.

What is needed here is a significant shift of workforce towards the handling of the orders end-to-end, from receipt of order, to organisation of dispatch, to delivery and to handling of customer feedback in order to continually improve and upgrade the offering. This cannot be achieved intuitively and calls for a transformation of businesses' operating models, adoption of new technologies and upskilling / reskilling of the workforce.

Initiatives that can be considered therefore include:

1. Government incentives to upgrade technologies to improve capacity and level of service in delivery / logistics and offer training to staff on the new operating models;
2. Cooperation between businesses and local authorities to offer solutions for all those who are in the risk groups (e.g., call centres that can handle the needs from those who cannot use online ordering); and
3. Parcel lockers outside people's homes or in various locations (such as supermarket parking places, post-offices, etc.) so that people can accept delivery of non-perishable goods at their convenience – also linked to this is the “click and collect” service now broadly offered in many places around the world.

For this industry also, the changes that are brought about due to COVID-19 can act as an accelerator for the transformation of the industry into a more productive model while also improving customer service.







B. Social

Current measures to fight the epidemic are associated with the severe restriction of freedom, e.g. reduced movement, contact bans, closure of markets, banning of events, etc. Corresponding government-led guidelines have been adopted for this purpose, which are being dynamically adapted based on epidemiological data.

According to the MIT Technology Review, by early April some 50 potential vaccines and nearly 100 potential treatment drugs were in development, (based on data from the Milken Institute) and hundreds of clinical trials were already registered with the World Health Organization (WHO). However, it will be some time before a vaccine becomes available and in any case it would be naïve to believe that after weeks of intensive restrictions, there is a possibility of returning to a pre-pandemic life in the short term. The danger of a “relapse” and the possibility of a “second wave” will impact living together substantially - and most likely until a vaccine is available.

The key challenge is to balance effective controls and far-reaching interference with personal rights. The collateral damage that can be caused by restrictions that exist for too long, such as polarisation of society, the feeling of being “patronised”, a possible increase in domestic violence, psychological problems, loneliness, e.g. of the elderly, and existential fears, especially among people who work in the field of entertainment, culture or sports, must be kept as small as possible (“Making the fight against the corona pandemic sustainable”, 2020). Cyprus is particular in that it has a social system based on solidarity, strong family-structure and strong friendly relations. While this structure might help mitigate disruptive shocks in

the long-term, the social distancing measures that need to be observed has lead to a drastic change in the way of living, in the development of insecurity about the future and personal or family health outcomes, in the face of the absence of treatment or a vaccine, as well as fear about the consequences to our financial standing on a personal and national level.

A preliminary study published at the end of April by the Centre for Applied Neuroscience (CAN) of the University of Cyprus has investigated the psychological effect of the coronavirus crisis on the Cypriot population and showed that up to 64% of people are experiencing stress because of the current situation with 47% reporting mostly stress regarding their financial wellbeing. The psychological effects of the crisis need to be properly managed and digital solutions for the enablement of social contact and psychological support may provide a relief using as exemplars models that have been proposed for application in other countries (“Recommended psychological crisis intervention response to the 2019 novel coronavirus pneumonia outbreak in China: a model of West China Hospital”, 2019). For social measures to work while maintaining the population’s mental well-being, if all societal stakeholders, government agencies, companies, associations and even volunteers must work together.



Government Propositions

1. Ease restrictions step-by-step in a controlled manner

The gradual normalisation of everyday life can only be achieved through a coordinated and controlled step-by-step plan. As noted earlier on, the plan that has already been announced by the government is also accompanied by guidelines which are necessary for operation of those organisations covered by the initial two stages of relaxation.

However, large scale social gatherings / events are also an integral part of our life. Prior to these being permitted during the third and fourth stages of relaxation, businesses and organisers could already consider what concepts could be applied when taking into account the principle of “social distance”, which digital channels are recommended as substitutes and which checklists are needed to ensure the highest level of safety for visitors everywhere. It is therefore urgent for the government to take further steps to begin to develop these guidelines so that to allow appropriate time for organisations to adapt.

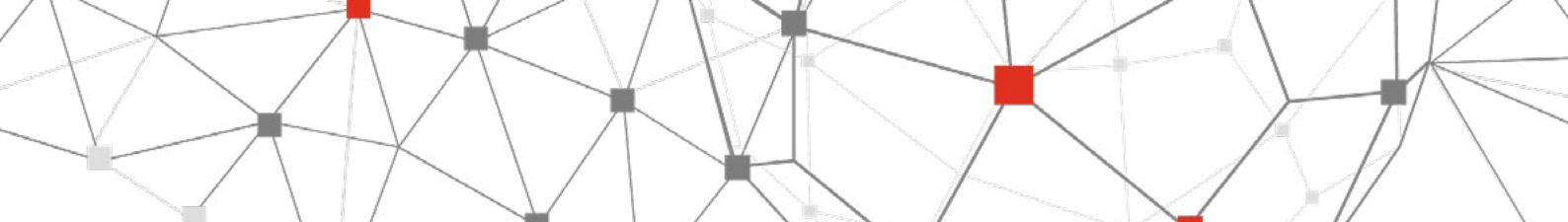
2. Promote pandemic-resistant cohabitation

A number of restrictions will continue to shape our coexistence for a while – the public life will be accompanied by protective measures in the foreseeable future even though many are in stark contrast with the Cypriot culture. However, these measures should be put in place so as to provide special protection for risk groups - an appropriate gradation e.g. to protect nursing

homes or specific contact restrictions and self-protection measures for risk groups are possible and necessary.

Highlights of these measures include:

1. Adaptations in public spaces to ensure minimum distances, e.g. by new cycle paths, distance markings on park benches, or the wearing of face masks and the availability of disinfection facilities, the supply of which should be ensured centrally. Especially in the private environment, contact restrictions will continue to apply, as well as in other public areas, including major events;
2. These adjustments shall be accompanied and reinforced by campaigns on the need for physical distance, strict hygiene measures, hygienically sensitive behaviour and self-quarantine in case of symptoms (in agreement with measures taken by employers);
3. Failure to comply with social distance requirements should be stringently sanctioned and backed up by appropriate legal specifications, timely and clear guidelines;
4. A higher degree of social acceptance of the new rules of living together is needed; information campaigns will help to contain lack of stability and loss of control. Communication must be public, transparent and honest, and must be aimed at balancing out the crisis awareness, compliance with measures and social cohesion. At the same time, it is necessary to appeal to the responsibility of each individual again. This is done best through public announcements, not only via the classic and social media, but also in public places such as bus stops (as was done in South Korea, for example) or in a targeted manner via digital applications; and



5. Associations, charitable institutions and non-profit organisations that promote social togetherness and stability in a variety of ways should also receive significant public and financial support, and the dissemination of these offers of assistance should be accompanied by communication wherever possible. This also includes repeated and clearly communicated appreciation and respect for all employees in the **healthcare** industry.

3. Reopen schools in stages - start with pre-school facilities, primary and lower secondary schools

Beyond the measure announced to allow the final year students to return to schools on 11 May 2020, it seems sensible to gradually reopen early educational institutions such as kindergartens and, primary schools and followed by lower secondary schools, as digital teaching formats there, are the least able to compensate for the lack of personal support. In addition, this will allow working parents to return to employment. Some European countries have already started implementing this step-by-step approach for controlled relaxation, which is a psychologically important sign. It is imperative to ensure that appropriate protective measures are also taken by educators and teachers and that people with risk potential are not exposed for the time-being.

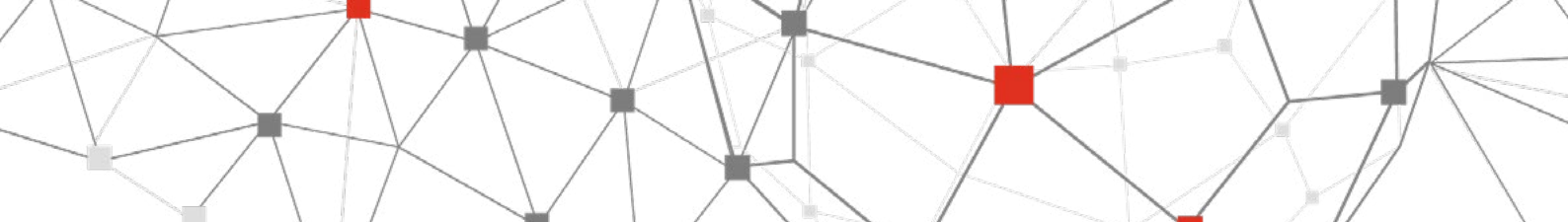
4. Expand remote schooling and online formats suitable and available on short notice

In the education sector, the current crisis reveals how much Cyprus needs a massive push. Measures taken by the Ministry of Education for remote teaching via video-conferencing platforms and static digital communication point in the right direction but are definitely not enough.

Schools should be equipped with the necessary infrastructure for remote teaching as soon as possible. This could be helped by a task force involving the necessary ministries and other government bodies. The aim would be to introduce reliable software solutions that are as uniform as possible at schools, without mature digital learning platforms/school clouds and to provide sufficient server capacities.

There should be intensive cooperation with the providers of e-learning platforms and software providers in order to make teachers fit for digital teaching quickly and in a targeted manner, e.g. in online training courses. To make it possible to teach an entire school class virtually, it takes more than individual internet skills. It also requires finding practicable solutions for data protection regulations, so that a balance is found between sensible digital teaching and an acceptable (though perhaps not perfect) level of data protection.

IT support from the private sector should also be used. Teaching staff cannot be left alone with this task. What is also required is a pool



of digital learning materials that is available nationwide, to which schools have access to. Formats for taking examinations as well as participation/performance records are to be further developed. A support fund should be set up for the acquisition of internet-compatible equipment (e.g. laptops or tablets suitable for homeschooling) for pupils from socially disadvantaged families.

As with other countries around the EU and the world at large, the current situation is a wake-up call to subject the tuition and higher education landscape to a nationwide, sustainable digitalisation push. Here, a virtue can be made of necessity and the overdue modernisation should be undertaken as quickly as possible.

5. Enhance expansion of web-based trainings to replace physical methods of delivery

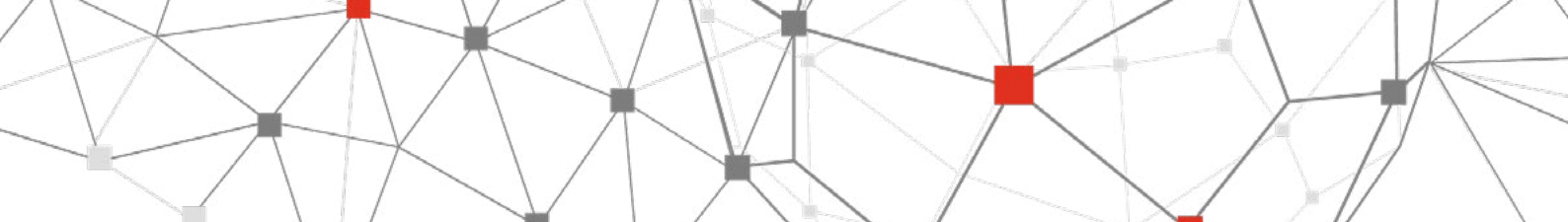
Despite COVID-19, the need for training and further education in organisations already exists or has even increased. For example, the virus makes it necessary to learn and internalise new guidelines; moreover, physical distance can make “learning on the job” more difficult. It is therefore necessary to digitise and modularise further education and training courses as quickly as possible. The COVID-19 crisis shows how important it is to take social aspects into account - and to enrich formal learning, for example through casual chat formats.

6. Employ state-supported digital solutions for monitoring and tracking the spread of infection

While social restriction measures are in place, digital solutions can be employed to control infection disease and protect vulnerable populations. One of the efforts that's been proposed to contain the spread of COVID-19 is a contact trace and track program that would allow health officials to keep better tabs on individuals who have been infected and alert them to potential spread. This has already seemingly proven effective in some parts of the world that have managed to curb the coronavirus spread, and a local initiative the COVTRACER - has already been developed and made available to citizens for registering symptoms and tracking movement. However, privacy issues around such systems need to be readily addressed and incentives need to be provided such that adoption is sufficiently big to bring the desirable result. (see also [C. Health](#))

7. Promote labour market digital upskilling / reskilling

Initiate targeted upskilling / reskilling programs in an effort to reduce the impact from the increased unemployment, both with respect to the number of unemployed persons and with respect to the total duration of unemployment, potentially through the Human Resource Development Authority (HRDA). Such programs should be targeted to enhance the skill set of the labour market in sectors of the economy that are underdeveloped and in which demand for skilled labour would exist post the COVID-19 crisis. Under this initiative, the involvement of local public and private universities and institutions, could promote the establishment of curriculums and enhance the skill-set of the future labour



market in specifically selected areas, such as logistics and ecommerce. The involvement of private institutions could be promoted through tax incentives that are linked to the successful completion of curriculums by unemployed individuals.

8. Incentives for the development of Elderly Housing and Assisted Living concepts

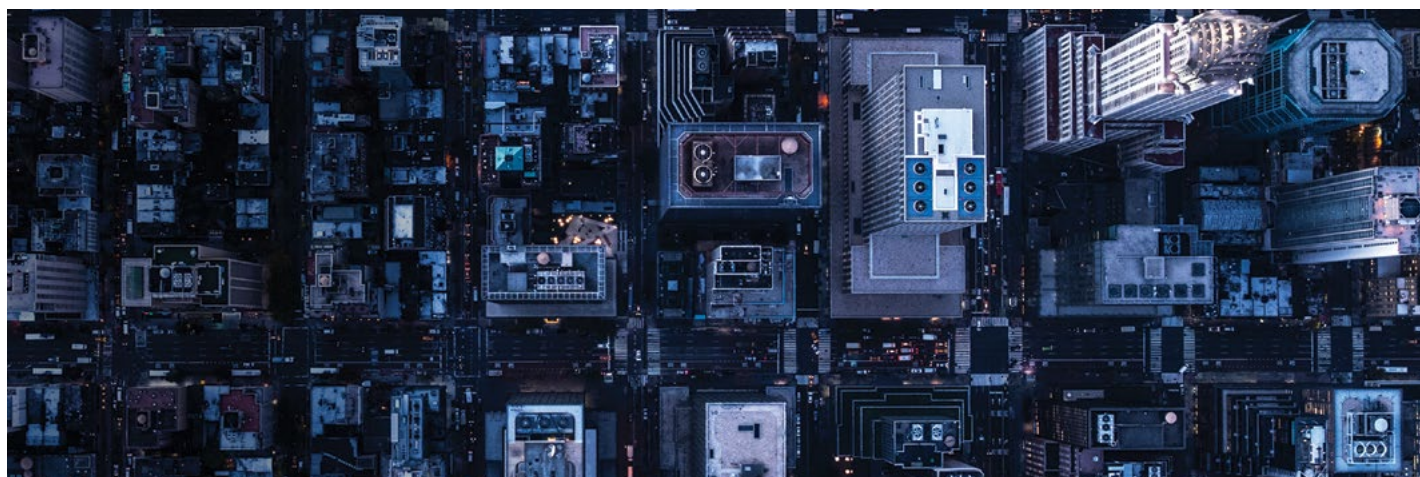
Cyprus currently demonstrates the lowest fertility rate across the EU and a relatively high life expectancy, with estimates suggesting that in the coming decades, Cyprus will have the largest increase in the rate of the ageing population in the EU. According to the latest EU forecasts, by 2070, one in three Cypriot residents is expected to be over 65 years old, which is equivalent to 200 thousand more elderly people than today. At the same time, by 2070, 15% of the population is expected to be over 80 years old, equivalent to an increase of more than 100 thousand.

Demographic shifts are expected to shape the housing market and pose enormous challenges to the country's healthcare system in the years to come. Currently, a significant portion of the elderly population ends up living alone or in couples in their three/four-bedroom family

homes where they have raised their families, which are large in size, difficult to maintain and do not have the appropriate conditions to support their daily needs that would enable them to be independent and sustainable for a longer period of time.

In the absence of adequate infrastructure and specialised housing, when in need of assistance and care, the elderly seek support from their families, which are not always available. This was further emphasised amid mobility restrictions and social distancing that we are experiencing due to COVID-19.

The need to develop a housing product which is tailored to the needs of the elderly is inevitable. The adoption of planning incentives to encourage the development of specialised Elderly Housing and Assisted Living communities and the introduction of Tax incentives to attract specialised and branded operators from abroad are expected to gauge private sector initiatives in this direction. At the same time, such investments could lead to potential savings in the public healthcare system and could even create opportunities for cross-product investments such as rehabilitation centres and medical tourism projects.





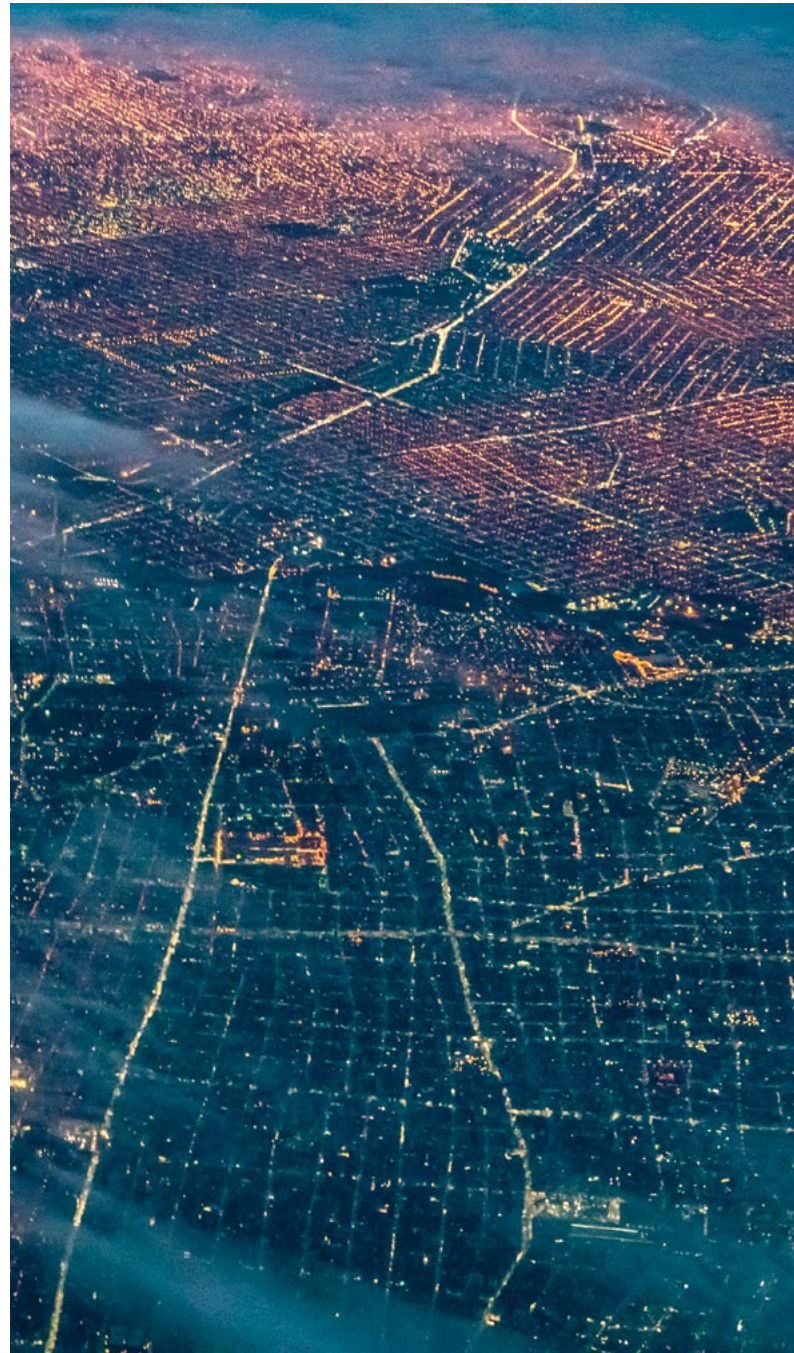
Business Community Propositions

1. Establish flexible childcare options

The reconciliation of family and career has taken on a new urgency with the COVID-19 pandemic. Employers who offer appropriate models are not only better prepared for the reboot phase, but also more attractive than their competitors. In addition to the possibility of working from a home office, this includes care services in employer-provided day-care centers and other support programs for families. Anyone who can offer a modern and flexible range of services has a head start in the competition for the best talent.

2. Accelerate digital upskilling

One of the aspects of a remote working reality is the concept of remote learning. Due to the current situation and the relevant restrictions some activities may need to be paused, which will shift employee priorities. This creates an opportunity for upskilling people during possible downtime via online channels, such as e-learning, podcasts, virtual classrooms etc. Identifying and prioritising must-have business and technical skills (such as data & analytics, remote working tools etc) is very important at this stage, as it will directly contribute to people's motivation and productivity.

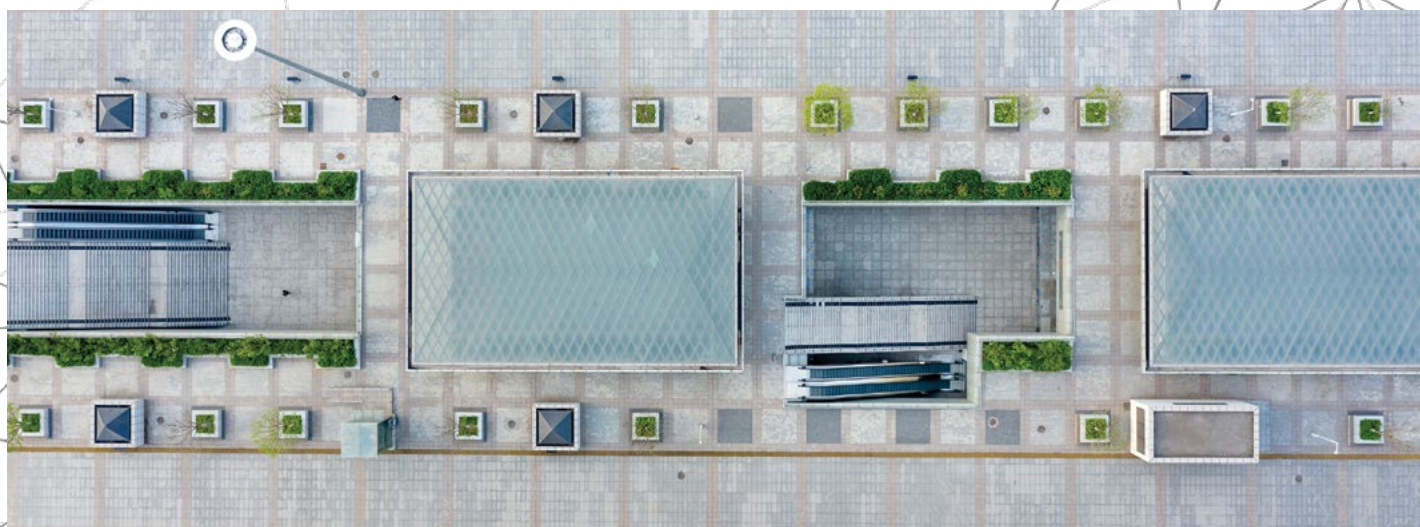


3. Strengthen internal crisis communication within the organisation and expand digital cooperation

Similar to the government level, private organisations also need COVID-19 task force teams that are able to ensure transparent corporate and crisis communication by using both analogue (e.g. notice boards) and digital channels for this purpose. A monitoring and reporting system of corresponding key figures, infections and immunisation is already established in most organisations. In order to simplify this, smartphone applications can be adapted and introduced in an organisation-specific way to collect data, send messages and help, as well as warnings (see also Society).

At the same time, an overall picture has to be drawn, regarding sick leave, substitution plans, flexibility of the operative work deployment, but also paying attention to the way risk groups are dealt with or if the working capital requirements are met. All this forms the basis for a coordinated restart, as the care and health protection of the employees is the top priority. Crisis management teams headed by the CEO should take over control here.

Many organisations have already taken the exercise to evaluate their work in regard to what has to be done on premise and where remote solutions are possible. This process should continue, even when measures are relaxed. To this end, the digital forms of cooperation should be further expanded, e.g. in virtual spaces or the corresponding enablers (IT infrastructure, remote access, VPN/network) and specifically promoted (e.g. through tax incentives). In recent weeks, many employees have gone through a steep learning curve in the use of digital means. This development needs to be further stimulated by online training and courses. Experience shows that employees accept training courses best when they are directly tailored to their function and role in the organisation.







C. Health

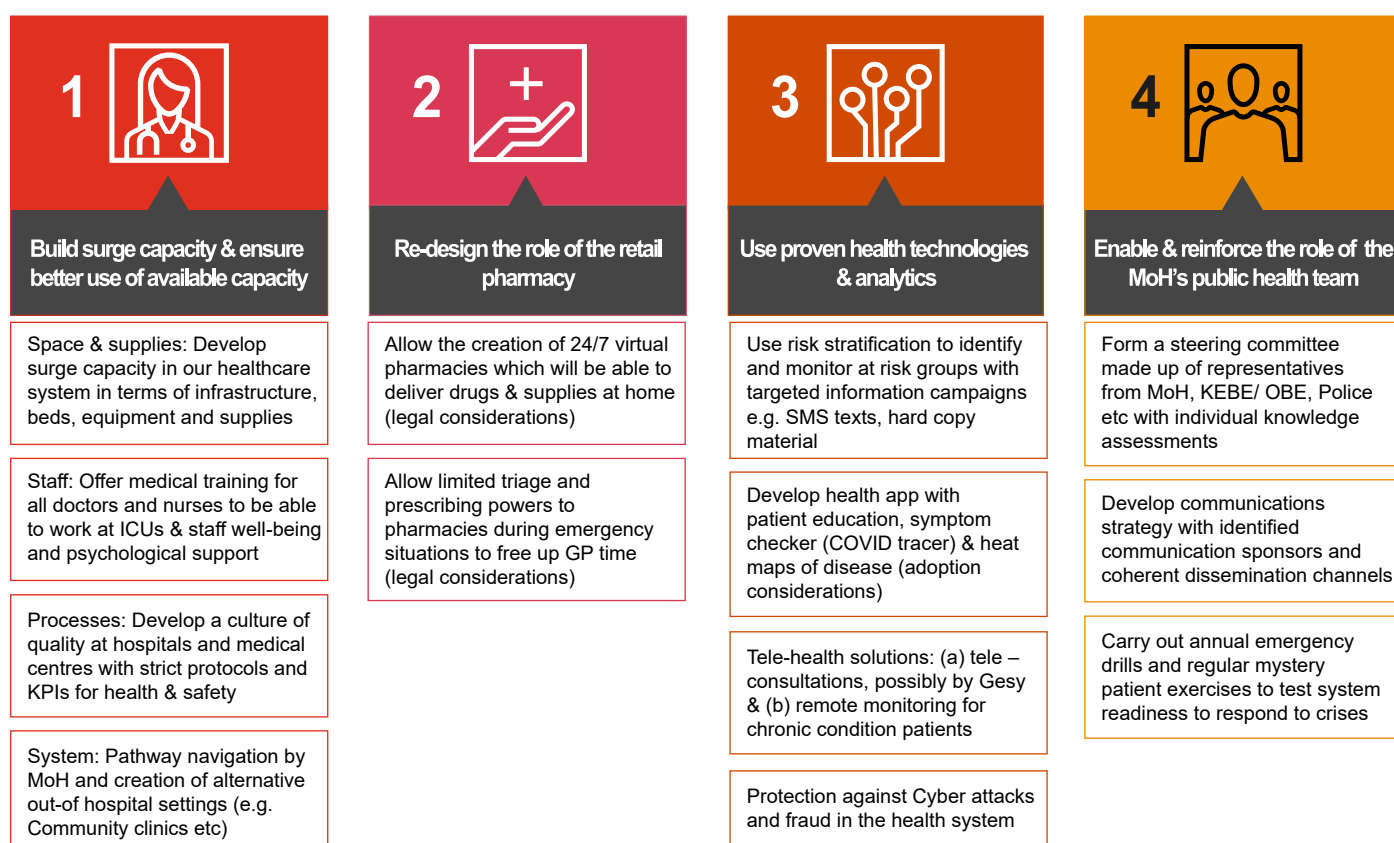
In general, world health systems are not designed to cope with pandemics. In Cyprus the annual average bed occupancy rate across our General Hospitals is circa 76% (Health & Hospital statistics, MoF, 2017), often exceeding the 85% mark during winter pressures (e.g. flu outbreaks), which is the ceiling for maintaining clinical safety following NICE guidelines. Yes, there are many emerging models of care, shifting the focus from treating conditions to preventing and managing them in out-of-hospital settings, which help to free up capacity. New technologies and innovative reimbursement models increasingly enable this shift. But these paradigm shifts are still at their infancy, even in more mature and established health systems than ours.

Accordingly, as a response to the pandemic the focus in phase 1 was on enforcing lock-down measures to contain the spread of the disease, while our healthcare system shifted resources and hastily built up more capacity (equipment, drugs, ICU beds) to handle the pandemic. This strong response, albeit justified, necessary and effective, is neither enough nor sustainable as a default crisis-response strategy. An analysis done by PwC Netherlands showed that around 40% of all medical care (i.e. most of non-emergency care) has been suspended in order to free-up capacity to treat COVID-19 patients. Similarly, in the UK NHS all non-urgent activity has ceased, thus freeing up 30% of all hospital

beds. Most countries, including Cyprus, have opted for a similar move - withholding elective care to free up capacity to fight COVID-19. Following the same PwC Netherlands study though, such policy could prove a ticking time-bomb for any national health system and its effect will be felt in two main ways during the coming months:

1. Many elective procedures have and will be permanently cancelled, thus causing significant revenue losses to our hospitals, doctors and other health professionals. For instance, the PwC Netherlands study compared the medical activities of a week during COVID-19 vs a normal week and found that dental visits were down by 95%; hospital activity was down by 40%; and physiotherapy appointments were down by 65%; and
2. The cancellations and postponements of appointments and procedures will seriously aggravate the health of some patients, with the impact falling disproportionately on fragile groups such as chronic condition patients and the elderly. This coupled with the fast-increasing backlog of unavoidable procedures (e.g. hip replacements etc) which will put extra burden on our health resources in the very near future, could potentially lead to many more victims than COVID-19 itself along the line.

Therefore, it is our view that more needs to be done in certain specific areas for our health system to be able to manage health crises or future COVID-19 waves in a more decisive, planned and controlled manner. Specifically, we recommend that the government and hospitals focus on implementing 4 key measures:

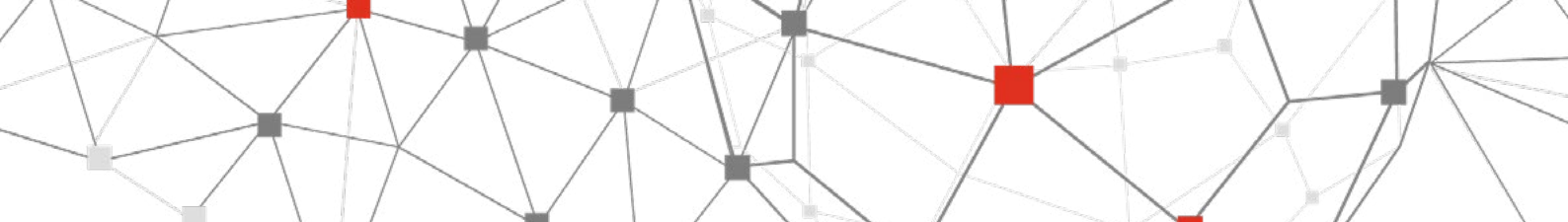


1. Build surge capacity and ensure better use of available capacity

As stated by the World Health Organization (WHO), surge capacity is the ability of a health system to manage a sudden and unexpected influx of patients in a disaster or emergency. Health systems (which do not otherwise suffer from capacity shortages in normal times) should not attempt to build permanent additional capacity as a response to COVID-19 as this would result in inefficiency and ineffectiveness during non-crisis situations.

The focus should be on building surge capacity and making better use of existing capacity on a continuous basis. Achieving this requires a multi-dimensional effort which encompasses coordinated measures across infrastructure and supplies, staff, processes and systems planning.

The Ministry of Health (MoH) has already acted with speed and decisiveness and has identified the underground space of the Nicosia General Hospital which is now being developed into a functional hospital for crises situations e.g. this could include space for triage, air ventilation, colour-coded linen etc. This gives a buffer of time within which the health system needs to identify additional available and suitable space which can be converted into medical wards and ICU in the case of an even bigger emergency.



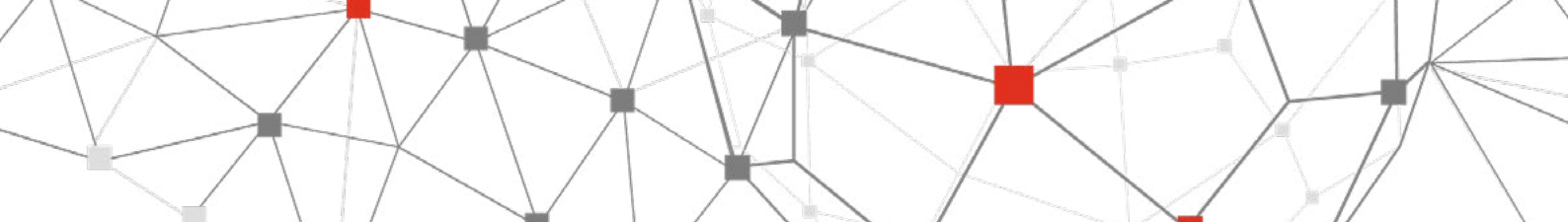
More potential sites such as community centres and hotels should be identified, and formal agreements should be in place for their requisition and conversion to medical sites in emergency situations. At the same time the focus should be in estimating and procuring the number of ventilators and other equipment such as masks and uniforms which will be required to staff the existing and new capacity. In addition to building stock of necessary supplies and equipment, the MoH should formalise supplier agreements and set up the appropriate procurement processes to ensure that medical supplies and drugs can be procured and delivered swiftly and in the right quantities when required.

The MoH and general hospitals may then identify the health workforce who should be involved in delivering care during a pandemic and repurpose and upskill them for rapid deployment to meet surge capacity needs (Health Systems Respond to COVID-19: Technical Guidance #2, WHO, April 2020), e.g. nurses trained on mechanical ventilator care. In times of staff shortages, the pool of intensive care staff could even expand beyond nurses to include experienced carers. Following WHO guidelines, all the workforce on the frontline of health delivery should be kept safe and protected through implementing Infection Prevention and Control (IPC) at all times. Moreover, it is very important to acknowledge and attend to the mental health needs of frontline staff through offering psychological support, stress relief and providing education and training on how to cope with stress.

Strict clinical quality protocols and health and safety guidelines should be followed by all staff in hospitals and clinics. COVID-19 exposed the lack of such measures (or the adherence to these measures) in our General Hospitals, where doctors, nurses and other staff were infected by the virus. Accordingly, the State Health Services Organisation (SHSO) should implement a stricter quality framework,

communicate it clearly to hospital staff and inspect that it is being observed through a series of Key Performance Indicators (KPIs). All staff, according to their role and capacity, who work in General Hospitals could be held accountable for knowing and adhering to quality protocols and the SHSO should make this part of their evaluation.

In addition to quality processes, the General Hospitals should also focus on re-designing their operational processes to address inefficiencies and long waiting times. To address these inefficiencies, however, the SHSO needs to look for the true causes of possible delays and dissatisfaction and their actual extent. Is it waiting for staff availability? Is it poor communication between staff? Is it poor quality of service causing re-admissions and infections? Is it poor planning and after care causing longer than necessary lengths of stay? Is it finding a free bed? Is it a slow patient registration process or triage process? The UK NHS faced a similar challenge in the past and carried out a short data collection from every patient for a week or so to identify the real bottlenecks in the system. Once these are bottlenecks are known, the General Hospitals and SHSO can design the right interventions to address them. If needed, there is a very rich international library of best-practice operational improvement programmes to address different areas that they can look at for inspiration. Carrying out a similar in-depth operational diagnostic and designing the right measures as a response, will allow faster mobilisation and greater efficiencies during a health crisis, while removing bottlenecks which often restrict available capacity.



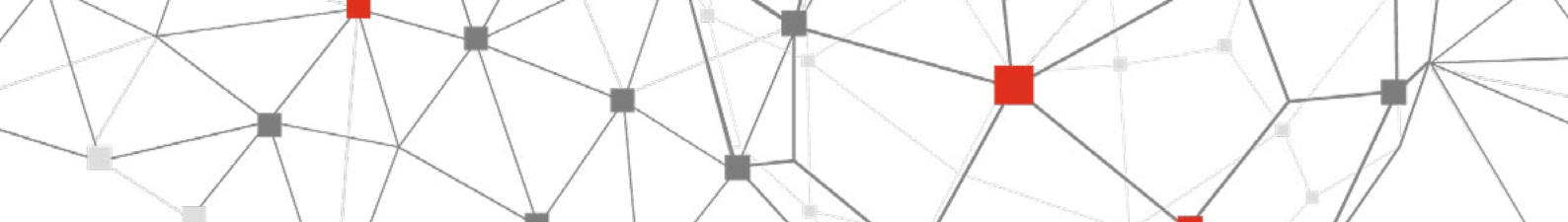
At a system level, the Cyprus health sector has a significant focus on acute hospital provision. Alternative, out-of-hospital (OOH), cheaper health care settings such as Urgent Treatment Centres (UTCs), community health provision and day case surgeries play a major part in many advanced healthcare systems in Europe and constitute one of the major pillars of the NHS reconfiguration towards a more sustainable and effective system. These three types of out-of-hospital settings are summarised below:

1. Community health provision includes a diverse range of services (e.g. adult community nursing, specialist long-term condition nursing, therapy services, preventive services such as smoking cessation clinics, and child health services including health visiting and school nursing) delivered in a wide range of settings – including in people's own homes as well as in community clinics, community centres and schools;
2. UTCs (also known as Urgent Care Centres, Walk-in Centres, and Minor Injuries Units) are open at least 12 hours a day - 365 days a year - and are usually GP-led but also staffed with other medical professionals and diagnostic equipment. They are suitable for diagnosing and treating urgent but non-life-threatening conditions such as minor head injuries, cuts that require stitches, eye problems, strains and sprains, broken bones and abdominal problems. It is estimated that around 3 million people who end up in the NHS A&E departments every year could visit UTCs instead; and
3. Day case surgery centres are dedicated clinics for elective, not major procedures which necessitate the use of bed for recovery purposes but do not require the patient to stay overnight. A study by the PwC Cyprus health team indicated that

the top performing European countries in terms of day case adoption (such as Denmark, the UK and the Netherlands) do roughly 45% - 50% of all in-patient surgeries on a day case basis. In contrast, Cyprus has a low adoption rate with only 25%. Moving towards a day case model will allow Cyprus hospitals to free up capacity and make savings while providing more patient convenience. For example, a recent report in France estimated that an increase of 3% in day surgery could result in savings of 200 million EUR per year (CNAMTS, 2018).

Medical audits in the NHS have shown that 20% to 25% of admissions and 50% of bed days do not require an 'acute' hospital bed as these patients' medical needs could be met at a more appropriate, usually lower, level of care, while 39% of people delayed in hospital could have been discharged using different, usually lower dependency, pathways and services more suited to meeting their assessed needs (NHS Improvement, Guide to reducing long hospital stays, 2018). In Cyprus, we are still relatively behind in terms of OOH. The COVID-19 pandemic has shed light on our reliance to acute hospitals and the dangers that this may create. Elderly patients, chronic condition sufferers, and patients with less acute needs often end up in hospital beds when they could be treated cheaper with greater comfort and convenience in OOH settings and UTCs.

Having these alternative settings becomes crucial in a pandemic when you need to free-up capacity in acute hospitals while protecting fragile groups by keeping them away from hospitals (these are usually the ones in need of community care). For instance, during the severe influenza season in the US in 2018, 78% of primary care physicians surveyed by PwC Health Research Institute (HRI) reported a massive increase in flu-related appointments.



About half said they told patients they could not see to go to an Urgent Treatment Centre, while 66% of medical insurance organisations were directing patients to lower cost OOH settings.

Nonetheless, in order for this system to work best, there needs to be a triage process in place first which will decide whether the patient should visit an UTC, an A&E department, a community setting or wait until their GP can see them. In Cyprus, such a system would help navigate the patient flows to the right settings and manage capacity issues. In the UK NHS, this service is provided by NHS 111 - a 24/7 telephone service attended by non-clinical call handlers who are trained to use a computer decision support system called NHS Pathways to manage calls. NHS Pathways is a nationally-validated algorithm built on clinical expertise combined with a real-time directory of services available for patients, which identifies the best source of help for the caller. In emergencies, the call handler will arrange ambulance transfer to an A&E where necessary (Care Quality Commission, The state of care in urgent primary care services, 2018). Developing a community-based health provision, UTCs, day case surgeries and implementing a pathway navigation system similar to NHS 111, may appear to be longer-term and more transformative structural changes but the COVID-19 crisis has provided both the rationale and the opportunity to push through with these initiatives. They will undoubtedly benefit our healthcare system and our citizens in the long run and create a more sustainable and effective provision of care.

2. Re-design the role of the retail pharmacy

For a population sitting at home, think of the retail pharmacy as a “last mile” player. Social distancing can be aided by pharmacies’ drive-through windows, telehealth options and home delivery. For the latter to happen though, the right legal framework needs to be created which will allow pharmacies to dispense and deliver medication to the patient’s home. Our General Healthcare System (GHS) has already provided the right IT infrastructure for this to happen as prescriptions are filled by doctors electronically which pharmacies are then able to access through the HIO system. Under the current framework, however, patients still need to visit a pharmacy in person to receive their medication. Other countries are already moving in this direction. For instance, under the UK NHS, pharmacies can deliver repeat prescriptions at the patient’s home. This addresses effectively the needs of patients suffering from chronic or complex conditions who need to make regular visits to pharmacies and are the ones who need special protection in a health crisis.

If hospitals become overwhelmed with COVID-19 patients, the retail pharmacy, with its skills in medication management, round-the-clock glucose monitoring and personalised health education can become a lifeline. For instance, pharmacists in some US states— notably California and Oregon—have been given limited prescribing authority, while an examination by PwC Health Research Institute of US state regulations shows a steady drift toward broadening pharmacists’ scope of services. In Cyprus, this measure will probably require a change in the legal framework before it can be implemented. Accordingly, this could only be an emergency measure with strict restrictions put in place in terms of the pharmacies’ prescribing authority.



3. Use proven digital health technologies & analytics

Risk stratification is the process of separating patients into risk groups based on various factors such as their age, medical history, lifestyle (e.g. smokers) and other health indicators. Payers (e.g. the Health Insurance Organisation (HIO)) and providers (e.g. hospitals) that are able to segment the populations they serve in this way, may be better prepared to proactively and more effectively direct communications and services to high-risk populations via SMS messages or phone calls. For example, frail elderly patients would likely benefit from time spent with care navigators who can help coordinate services on their behalf, set up clinician house calls and call in paramedics or community nurses trained to provide home-based medical care. These actions can help prevent unnecessary trips to hospitals and GP offices busy with infected patients. Payers might persuade these populations to switch to mail order pharmacies or home delivery of prescriptions (see point #2 on the role of pharmacies, above) to avoid having to pick up medications in person.

They may help coordinate delivery of groceries, even, and basic items to help keep vulnerable people at home. Risk stratification is a fundamental process in many health care systems across the world (e.g. for Clinical Commissioning Groups in the UK NHS) and does not require highly specialised tools or technology. All it takes is setting up the right data collection mechanism and governance and then applying data analytics.

In the fight against the pandemic, certain countries have chosen to deploy digital solutions for contact tracking (so-called “corona apps”) with the aim to contain the spread of the virus. Notable successful examples include China, Israel (HaMagen app) and

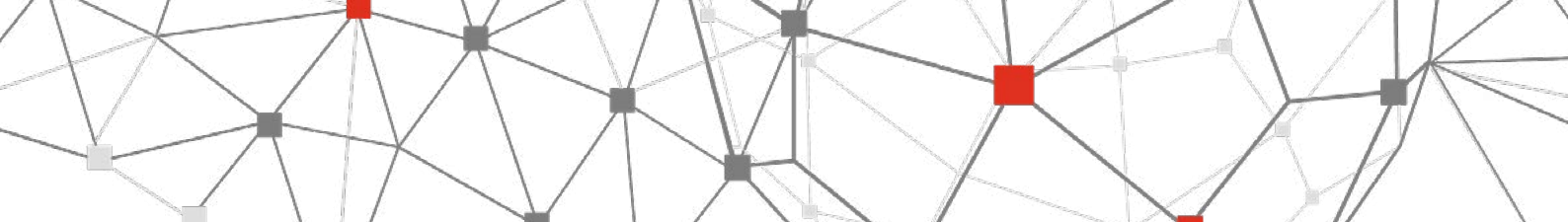
Singapore (TraceTogether app) and various other countries are in the process of developing similar apps mostly based on the Singapore example. COVTRACER, the contact tracing app, developed by the RISE research centre in Cyprus, has also been built along the same principles.

For any of these apps to be useful,

1. it should run on both IOS and Android;
2. there should be strong incentives for adoption in place e.g. in Singapore only 1 in 6 people downloaded the app by April 2020; and
3. it should not violate any data protection laws.

More thorough investigation is necessary, but the Israeli app appears to be a good example as it runs on both iOS and Android without violating data protection. Regarding adoption, modelling by researchers at Oxford University has suggested that 80% of all smartphone users in a place of one million people would have to use a tracking system to be effective against the coronavirus (Kelion, Leo “NHS coronavirus app to target 80% of smartphones”. BBC News, 2020-04-16). Luckily, the proposed Google/Apple contact tracing plan intends to mitigate this adoption problem by incorporating the tracing mechanism in their device operating systems. In addition to contact tracking, the health app could also incorporate other important features such as:

1. a symptom tracker;
2. relevant contact numbers;
3. useful information and guidelines regarding the pandemic (e.g. lockdown measures, tips on health management etc); and
4. concentration heat maps for important places where people gather in numbers (e.g. supermarkets, post offices, pharmacies etc).



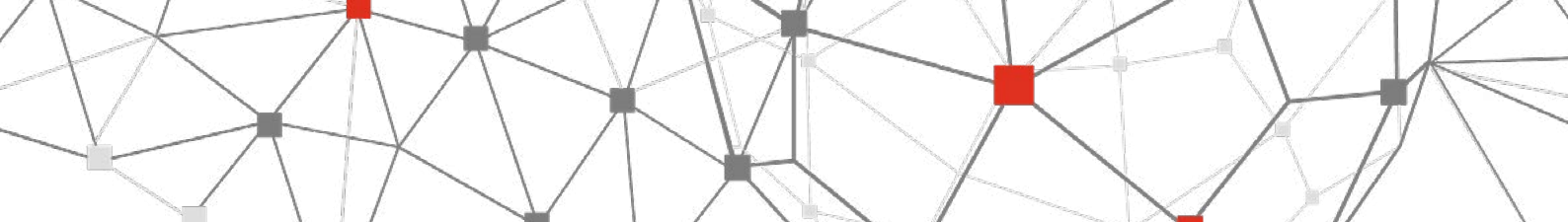
Telehealth has been around for a long time, and yet nearly all countries have been relatively slow to adopt this mode of receiving care in large numbers.

Now, out of necessity, there is a shift in consumer and provider attitudes to receiving some forms of healthcare virtually. The most obvious and common application of telehealth during the COVID-19 crisis has probably been Tele-conferencing. Many GPs, paediatricians and psychologists have provided their services to many patients through video-calls amidst the lock-down. Tele-conferences (no space) may also be a way for quarantined asymptomatic clinicians to work as caseloads increase. This quarantined workforce should be used to provide virtual triaging or monitoring of at-home COVID-19 patients. Interoperability and security considerations will need to be given to enable this workforce to work remotely and provide healthcare to others. Accordingly, to overcome these considerations, it might be worth exploring whether the IT system of the HIO can somehow incorporate or link to a virtual tele-conferencing platform for GHS's GPs to use. This would also ensure a clearer and more consistent patient pathway and enable better data collection and connectivity to the rest of the system functions (e.g. prescribing etc).

Digital health goes beyond enabling video visits or teleconferencing appointments. It may also be a way to help prevent patients who are already struggling with chronic illnesses from deferring maintenance care. The rise of COVID-19 has not diminished the normal demand for the health system to manage chronic diseases, but during the pandemic there needs to be a continued focus to keep people with chronic illnesses and comorbidities out of hospital. In single-payer systems such as the GHS, using digital care to monitor chronic condition patients can improve outcomes

and reduce costs, expand access to services especially for remote populations, improve utilisation management and radically promote preventive management.

Several healthcare systems around the world have already employed virtual health solutions. Certain best practice initiatives could be replicated by the SHSO (ΟΚΥΠΥ) or adapted to suit the Cyprus reality. For instance, Netherlands-based Royal Philips partnered with Changi General Hospital in Singapore to help patients manage their heart conditions at home. Patients were given a weight scale and blood pressure monitor to check their weight, pulse and blood pressure readings daily. A personal tablet wirelessly captured the readings and uploaded them to a central monitoring system.



Nurses remotely monitored patients and intervened when care was needed. After one year of the pilot programme, the length of stay for heart failure- related admissions was reduced by 67% and the total cost of related care dropped by 42% (PwC HRI, Global top health industry issues: Defining the healthcare of the future, 2018).

Some may argue that the GHS is still in its infancy and it would be too soon to roll out virtual health solutions (or too complicated to reimburse them). This would be a missed opportunity. It would be relatively straightforward for the GHS, being a single-payer system, to work-out reimbursement rates for virtual health solutions based on the current fee-for-service catalogue. Then the SHSO, could roll-out tried and tested initiatives (through international partnerships). Alternatively, the MoH could fund and provide - through partnerships with established global tech providers- virtual health initiatives for targeted chronic conditions.

It is usually the case that during a health crisis, cyber-attacks and fraud in the healthcare system go up as organisations and policy makers re-focus resources and rush to implement new systems and technologies. Also, the fact that health organisations tend to be less sophisticated than organisations in other industries such as banking when it comes to data protection coupled with the large volume of high-value data that these organisations hold, makes healthcare a big target for cyber-attacks.

Last year, a record number of cyberattacks on health systems occurred, and the number of medical devices vulnerable to cyberattacks increased by 525% (PwC, Top health industry issues of 2018: A year for resilience and uncertainty).

Only 36% of providers and payers in the US have access management policies in place and 34% have a cybersecurity audit process in place (PwC, Top health industry issues of 2018: A year for resilience and uncertainty). Most likely, these percentages are even smaller in Cyprus. The HIO, MoH, SHSO and all private providers alike, should make cybersecurity an expectation. They should measure the risk from threats and allocate money and resources to address their most critical needs.

Risk measurement would need to include multiple factors, such as patient safety, financials, regulatory fines, reputation damage and operations disruption. Cyber security should be the top priority in the agenda of all health organisations in Cyprus and they should invest as much money as necessary to ensure that their patients' data is well protected.



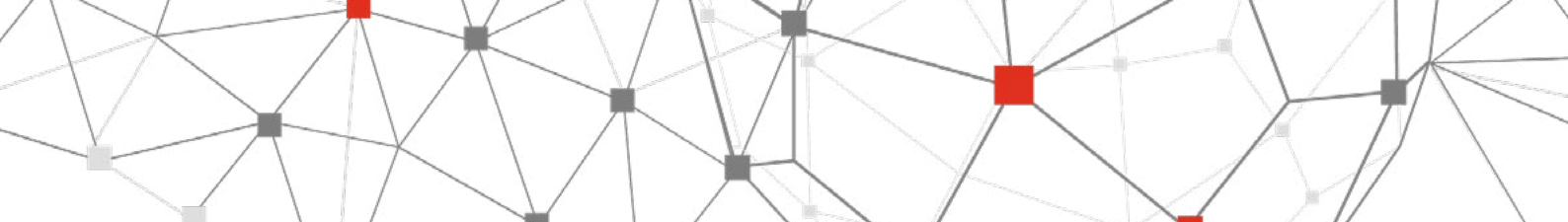
4. Enable & reinforce the role of the MoH's public health team

As clearly demonstrated by those countries which are managing successfully the spread of the virus and are 'flattening the curve' (of which Cyprus is a part, thankfully), a successful pandemic response requires close coordination between the health system and the greater community. How can we advance and build upon coordination to improve a pandemic response?

The parallels to community pandemic response are similar. What we do in our own homes and communities can have a great influence on the spread of a pandemic and the health system's ability to respond. The many waves of closings and cancellations could have the impact of slowing down the virus's spread. So could employers' decisions to ask employees to work from home. Building the collaboration and figuring out which organisations will participate in pandemic response efforts are critical. PwC HRI research revealed the importance of engaging a wide variety of organisations, including non-health organisations, as illustrated in the figure below.



Source: PwC



In Cyprus, the MoH's public health team could take the lead in forming a representative committee with additional members from the Cyprus Chamber of Commerce and Industry (CCCI)/Cyprus Employers' and Industrialists' Federation (CEIF), HIO, SHSO, Cyprus Association of Private Hospitals (CAPH), Ministry of Labour, Ministry of Finance and RISE amongst other groups which will preside over health crisis. The members of this committee should put together an all-encompassing strategy for health crisis management and should undergo individual knowledge assessments to ensure they are prepared all year round.

In addition, the crisis committee should be responsible for putting together a base communications strategy which identifies key audiences, how to reach them, tailored communication messages, as well as communication sponsors who can help disseminate the right messages. This will ensure that in a future crisis, the communication strategy (with the right adaptations) will allow the government to diffuse a coherent, compelling message quickly and with maximum effectiveness.

Staff at hospitals and other organisations which are critical in the fight against a pandemic should be made aware of the strategy for the health crisis management and maintain a good understanding of it. Accordingly, they should take individual knowledge assessments to test and strengthen their understanding on critical areas. Also, the management of these organisations should run periodic relevant drills for crisis management and the MoH should assess that the General hospitals follow the right processes and procedures by running regular "mystery patient" exercises.



D. Other Initiatives - International Affairs

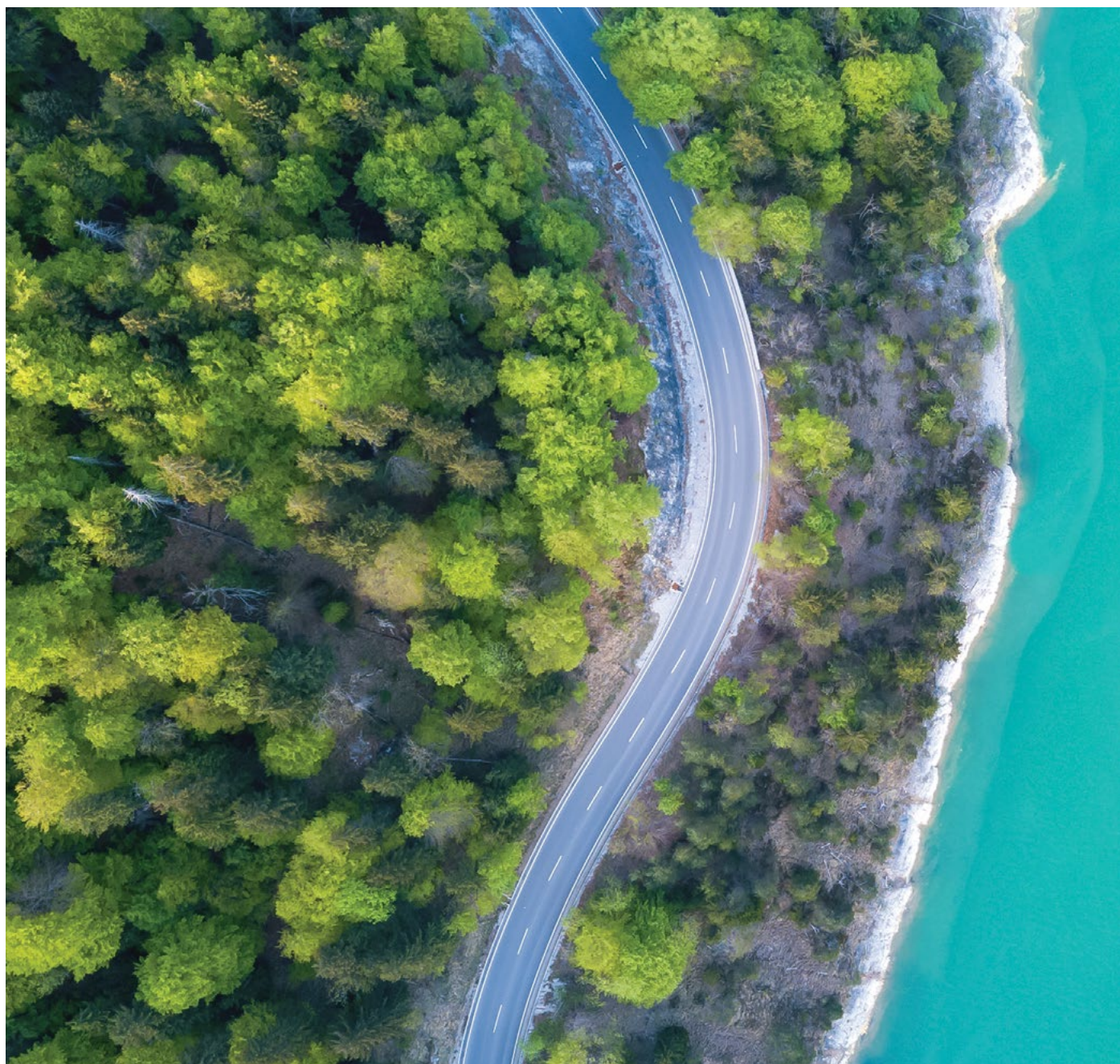
In addition to the three main fields of action, the Cyprus government will benefit largely by participating in cross-border initiatives, exchanging best practices from European and International allies and supporting the EU in initiatives related to

1. The ramp-up of international trade;
2. Strengthening of European Sovereignty in critical sectors;
3. The procurement of Personal Protective Equipment (PPE) throughout Europe;
4. Coordinating the freedom of movement within Europe;
5. The improvement of disaster control and civil protection; and
6. The ramp-up of initiatives supporting international solidarity for developing countries.



Bringing it all together

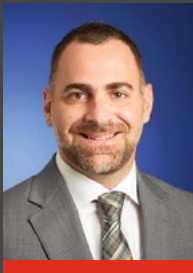
COVID-19 has called for vigorous action to protect the health of the population in the best way possible requiring significant sacrifices in terms of social and economic life. At the same time, the current situation presents a unique opportunity to accelerate much needed reform and to refocus our national economic strategy. Learning from the past, building on the successful handling of the pandemic to-date and through a collaborative effort between the government and private sectors this might actually be Cyprus' chance to emerge stronger and more forward.



Contact us



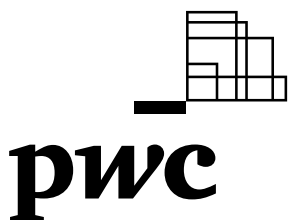
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