

After the shock: Learning to thrive in a (post-)COVID-19 world

COVID-19 has arrested the attention of the world, and a great deal of information has been published about the pandemic in recent weeks. We've all been struck by the statistics on the risk of infection, hospital and intensive care unit (ICU) admissions and mortality rates, but also by concepts like 'flatten the curve', 'herd immunity' and 'social distancing'. As we try to make sense of the data, one fact is clear: No one will remain unaffected.

Many of Deloitte's clients are facing serious, sometimes transformational, questions. How will the health crisis, and our government's response to it, evolve over the coming months? Will we return to mostly 'business as usual' after a couple of challenging months? Or will we forever live in a post-pandemic world that sees fundamental changes to health, work, mobility, safety, food and energy? What will be the impact on my organization? How can we respond, recover, and eventually thrive? Now is the time to make a game plan to not just survive, but be a winner in the (post-)COVID-19 world.

Many perspectives on how companies should deal with the COVID-19 crisis are already circulating. This article adds value to that debate in four ways. First, our starting point is a set of logical assumptions and facts about the virus's dynamics, from which readers can draw their own conclusions. Second, we try to explain the logical links among the dynamics of the virus, the resulting government interventions, and the impact on our economy. Third, our focus is not short-term crisis mitigation, but the possibilities the next months hold for creating sustainable competitive advantage. Finally, although a lot of our insights are internationally relevant, we provide specific details on the situation in the Netherlands.

Summary: Deloitte's view on COVID-19 impact in the Netherlands

- Even though COVID-19 is far less deadly than originally assumed, we will still need interventions to contain the virus spread, until we have a vaccine in 12-18 months
- The interventions in this 12-18 month timeframe will follow an escalation scheme, where effectiveness in flattening the curve is weighted against economic and societal disruption
- We are well under way in overcoming the first shock, and we will see a gradual return to normal life in May and June, but no structural return to business as usual until summer 2021
- We will also not live forever in a post-pandemic world; don't bet the company on long term investments in the "1,5 meter economy"
- In the coming months we will live in a world that will feel like business as usual at times, and will suffer from short periods of disruption due to escalating social distancing interventions
- The main objective for companies should be understanding the impact of these disruptions on your industry, and becoming robust and adaptive enough to handle these disruptions
- Companies that succeed in this aim will attain a significant competitive advantage, and will be able to fundamentally reshape their position in their industry ecosystem.
- This will bring benefits in the coming 18 months, but even more afterwards, when the world mostly returns to normal

Understanding the COVID-19 pandemic

We believe that any discussion of economic scenarios should be grounded in a solid understanding of the dynamics of the virus, and the government interventions those dynamics will require. The four most important variables to understand the dynamics and health system impact of COVID-19 are:

- **Infection rate** – This indicates how fast the virus spreads. Without interventions, how many people would be infected, over what period, and with what peak?
- **Health impact** – What is the health system impact of infections – hospital admissions, ICU stays and mortality – in terms of *real* COVID-19 cases, not just those *measured*? This includes differentiating for such characteristics as age and underlying conditions.
- **Capacity** – This is the extent to which we can handle the health impact (hospital and ICU admissions). How large is our ICU capacity and how much can we scale up? The focus here is on avoiding overwhelming critical capacity, such as the current ICU capacity.
- **Duration** – Here we consider the ‘finish line’: Will we be saved by herd immunity, a vaccine, medicines that cure the disease, or perhaps a natural break, such as the summer months?

There has been a great deal of uncertainty and confusion about the right numbers for these variables. A typical example is the global case fatality rate; in early World Health Organization reporting this was stated as 3,4 per cent. Media reporting about the situation in Italy implied an even higher mortality rate: above 5 per cent. These numbers were generally derived from dividing the reported number of deaths by the reported number of cases. In reality, these numbers seem to have been gross overestimates, mainly because cases with mild symptoms have been significantly underreported, due to limited testing capacity. Statistics from countries with more intensive testing regimes, such as Germany and South Korea, indicate that mortality will be probably in the range of 0,3 to 0,7 per cent.

This same dynamic applies to the number of admissions to hospitals and ICUs, which was significantly overestimated in early weeks. It is important to understand that the rates mentioned here are averages for the entire population; the actual risk is strongly skewed toward the older (60+) population and people with underlying health conditions.

Dynamics in the Netherlands

Our goal with the calculations that follow is not to be 100 per cent correct or exact, but to be correct enough to be able to draw relevant conclusions on how the coming 12 to 18 months will evolve in the Netherlands.

Regarding the infection rate, or ‘basic reproduction number’ (R_0), we have the least uncertainty. From the beginning the international range has been stated as 2,2 to 2,6, and the Dutch National Institute for Public Health and the Environment (RIVM) is currently working with 2,3. This means that, on average, without interventions, every infected person infects 2,3 other people, leading to an exponential growth curve of the virus. The RIVM also assumes a doubling time of 5 to 7 days. Without trying to be exact, this means that without any type of intervention the virus would infect the majority of the Dutch population in 3 to 4 months, infecting more than 500.000 people per week during peak weeks. This assumption is consistent with modelling in other countries, such as the influential Imperial College London model for the United Kingdom.

In terms of the health impact in the Netherlands, for each (real) COVID-19 case we assume 0,5 per cent mortality and 1 per cent ICU stays. These percentages are significantly lower than many earlier estimates; as we stated above, that has to do with limited testing and the consequential underreporting. With increased testing, we are getting closer to the right numbers. When applying

the flatten-the-curve logic to capacity, ICU admissions is the most important number; we are assuming that out of every 100 actual (not just reported) COVID-19 cases, one person will end up in the ICU.

Also relevant is the length of time those patients spend in intensive care. If each ICU bed is occupied for only a week, given the 1 per cent ICU admission assumption we could handle 100 new cases per week with one ICU bed. But if that extends to two weeks, we could handle only 50 new cases per week. The RIVM assumption about the average ICU stay changed a couple of weeks ago, from 10 days to 23 days. For our modelling purpose we will use 14 days, which is closer to the international average.

Let's move on to consider capacity. Typically, in the Netherlands, we have a capacity of around 1.150 ICU beds. Until recently, about 300 to 400 of those were available for COVID-19 patients; we have now scaled up to accommodate approximately 2.000 COVID-19 beds. We have to assume that this type of capacity can only be created for specific peak weeks and cannot be sustained for a longer period, as it will have a very disruptive impact on the Non-COVID related healthcare.

For every 1.000 ICU beds ready for COVID-19 patients, with the assumption of 1 per cent of real cases ending up in ICU, and two weeks of stay per patient, we can handle 50.000 new COVID-19 cases a week. If the length of stay is longer, this would be less. If we scale up to 2.000 beds, it's more. So let's assume a range of 50.000 to 100.000 new cases per week that we could handle in peak weeks without overwhelming the (already significantly scaled-up) ICU capacity. If cases are concentrated in a specific geography or with the most vulnerable age groups, the impact would be higher. Again, the point is not to be 100 per cent correct, but to be able to draw the most relevant conclusions.

The final variable to apply to the Netherlands is duration, estimating the time it will take to reach an endpoint in the pandemic. The development of a vaccine seems to be the fastest option, with scientists predicting it will take 12 to 18 months. But an alternative ending may be achieved through herd immunity, which the Dutch government has indicated could be reached if approximately 60 per cent of the population has been infected by the virus.

This logical fact base and model leads us to two simple but important insights. The first is that if we don't use interventions to control the spread of the virus, it will overwhelm even our significantly scaled-up ICU capacity by more than 500 per cent. It is simply not an option to let the virus roam completely free. The second conclusion is that waiting until we reach herd immunity would take two to four years with a constantly maxed-out ICU capacity and a huge strain on our healthcare system.

If we combine those two insights, we can understand and predict our government's response. We will need to somehow hold out until we have a vaccine, which will hopefully be ready and available in 12 to 18 months. In the meantime we need interventions to contain the virus spread, while balancing the effectiveness of those interventions with their economic and societal costs.

Interventions: Striking a balance to save lives

If the goal is to flatten the curve, to not overwhelm our healthcare system, three types of interventions are possible:

1. Diminish the virus spread: Identify and isolate infected people, enforce social distancing, close schools, close restaurants and bars, practice full lockdown.
2. Diminish the health system impact of infections: Apply successful therapies, practice early testing and intervention, find ways to scale down the length of ICU stays.
3. Increase our capacity to absorb the impact: Scale up ICU and other hospital capacity.

Out of these, the preferred interventions are focused on preventing the virus spread, which deals with the problem and not just the symptoms. The main focus of such measures is to limit the moments of high-risk contact between the infected population and the uninfected population. Clearly, identifying and isolating the infected population would be much more effective and less disruptive than restricting the movements of the far-larger uninfected population.

To be able to do this effectively, it's critical to gain insight into who is and is not infected, focusing on quickly identifying and isolating infected people and their contacts. To this end, widespread testing is crucial, combined with good 'track and trace' data collection, algorithms and fast, effective quarantine protocols. If this fails, we will have to resort to measures that affect the uninfected population – a much more disruptive path. In that case it should be clear that the most effective measures are those that place a maximum limit on (high-risk) contact moments. However, 'locking up' an entire population to reduce the movements of fewer than 0,1 per cent of people (the infected, in a relatively early stage of the outbreak) should be seen only as an extreme last resort, when control over the situation has been lost.

We should also bear in mind that all measures, including the most disruptive (total lockdown), will reduce the peak of the virus but will not eradicate it; this is especially true as long as borders remain open.

The evolving Dutch COVID-19 situation: An 18-month forecast

Efforts to flatten the curve in the Netherlands seem to be working, and we're gaining ground in suppressing this first COVID-19 wave. Since the beginning of April, hospital admissions and, subsequently, ICU admissions have been slowing down. Expectations are relatively positive for the summer months, with the knowledge that – as historically, with related viruses – the spread might slow as warm weather moves in. We expect most restrictions to be gradually released in May and June. But when the pandemic eases, the economic fallout and insecurity will remain. And, more importantly, we have to prepare for a potential second wave of outbreaks in the coming autumn and winter.

Gathering data, weighing costs

We'll see a great amount of research and discussion aimed at understanding the costs (economic and societal) and benefits of various interventions, and the right order and combination of these interventions. How many hospital and ICU admissions and deaths, in different age groups, does each measure prevent? And what are the different economic and (where quantifiable) societal implications of each?

It will be important to assess the impact of intervention measures on specific sub-groups of society. For example, the isolation of elderly and vulnerable people has a relatively large effect, but what about children, who seem to be less sensitive to infection and transmission (although this remains unconfirmed)? It's not yet clear how much benefit school closures are bringing, but early evidence suggests this is one of the measures with the worst cost-benefit ratio, as the economic disruption is high and the impact seems far less than with other social distancing measures.

Once we gather and connect more data and can weigh economic/societal costs against benefits, we can form a factual assessment of whether the additional impact of a more disruptive measure would be worth the costs. This might also lead to a complicated societal and ethical debate about what we are willing to do to prevent COVID-19 deaths versus other deaths. How do the economic and societal costs that are incurred to prevent COVID-19 related deaths match those of other diseases? What

about considerations of the costs per quality-adjusted life year (QALY) for each disease? The fact is that COVID-19 is 'competing' with other diseases – and other societal priorities – for our attention. So what is its fair share?

Escalating interventions

Deloitte predicts that, from this discussion, an 'escalation scheme' of interventions will follow, with the government's intent being to avoid the most disruptive. These interventions will be ranked, on the one hand, by their effectiveness in reducing the virus spread, and, on the other hand, by their economic and societal disruption. We expect the primary ranking to favour minimal disruption: In the early stages of an outbreak the government will start with the least disruptive measures and escalate when necessary.

As mentioned earlier, it should be clear that the measures with the best cost-benefit ratio are focused on identifying and isolating the infected population, as opposed to restricting the movement of the far-larger uninfected population. For that reason, we assume there will be significant government investment in testing capacity and better technological solutions for tracking and tracing, to quickly identify infected people and their direct contacts.

If that does not lead to adequate (regional) containment, there will be an escalation to more disruptive measures. The first will be more social distancing, such as recommending working from home and 1.5 meters' distance in social interaction. After that the government will probably move toward banning large events with more than 100 people, followed by bar and restaurant closures, and eventually school closures and full lockdown. There are many variations possible in this escalation scheme, including specific regional measures, or measures targeted at protecting high-risk groups.

The focus will be on containing the virus without having to escalate to the most disruptive interventions, but we cannot guarantee that this will always be successful. This is why, in addition to the investment in containing future outbreaks, there will be investment in preparing to better handle the outbreaks that cannot be contained. Our Dutch health system will prepare by expanding the capacity and resources of hospitals and ICUs, which include critical materials, and paying close attention to enhancing the well-being and productivity of health professionals. We expect a significant increase in investment in virtual care and digital care processes, to alleviate the burden of the disease on the entire healthcare chain. This will also help address the barrage of delayed non-COVID-19 treatments that's building as resources are re-allocated to COVID-19 patients.

Dutch business: Potential scenarios and implications

Deloitte's contention is that the Netherlands will probably not return to 'business as usual' in the coming year, at least in structural terms. Hopefully, there will be a few tranquil months after suppression of the first peak, as better weather rolls in from June to September. But if the coronavirus strikes again, we will see the same exponential dynamics and will have to intervene quickly. The scenario will be familiar to all of us by now: trying to avoid the most disruptive measures but practising temporary social distancing, working from home, cancelling events, and potentially closing bars and restaurants for a short period.

On the other hand, we likely won't find ourselves operating in a post-pandemic world where everything is different. We'll probably still need office buildings, shops, travel, live entertainment, restaurants, and the like. The economy will have suffered an unprecedented shock brought on by the March-to-May interventions, but also unprecedented government aid in the months after. And we

expect an acceleration and boost for some processes already in progress, such as virtual working and digital transformation.

Together, we will try to avoid strong disruption to the economy and social life in the Netherlands, or at least minimize it, and we will succeed most of the time – just not always. Deloitte anticipates a ‘disruption interval’ world: normal at times but with intervals of severe disruption that have clear triggers, and escalations. Depending on what economic impact the current and subsequent measures will have, we could face any of the following macro-economic scenarios.

- **Best case:** We are in a state of relatively short-lived shock in terms of demand and the supply chain. After it’s over, businesses and the economy will gradually recover, starting this summer, and future interventions will cause limited disruption.
- **Worst case:** An exponential decline in demand and the interruption of global trade and supply chains, augmented by recurring lockdowns well into 2021, will tip the world economy into a deep and prolonged recession.
- **Base case:** In this ‘middle’ scenario, multiple, small shocks over the next 12 to 18 months will be followed by a moderate recession and a gradual return to growth.

Any of these situations can place a heavy burden on business. To thrive in such a world, companies must invest in becoming as robust and adaptive as possible.

Thriving when the pandemic shock subsides

Given the likelihood of disruption intervals, there is a short and crucial window of time over the coming months for companies to prepare for the 12 months that will follow. Deloitte encourages business leaders to take advantage of what is expected to be a relatively normal period over the summer, readying companies for COVID-19 intervals throughout autumn 2020 and into spring 2021.

In these next few months, as your business recovers, look beyond to prepare for what’s next. Key questions all organisations must answer are:

- How can you be better prepared for social distancing interventions, which will fall within different timeframes and vary in their degree of impact around the world?
- How can you reduce the impact of the next COVID-19 intervals and more seamlessly transition to new ways of working (e.g. from office to home)?
- How can you seize opportunities in this dynamic environment?
- How can you recover and thrive in the ‘new normal’, coming out of disruptions stronger than your peers?

Deloitte’s strategy for thriving features three points of action: Understand relative exposure to interventions, increase robustness and boost adaptivity.

1. **Relative exposure:** Determine whether your industry sector will be hit harder than average, or fare better than others. Identify any impacts of the crisis that are specific to your line of business, including those that will threaten your supply chain. Then identify the opportunities that are emerging right alongside.
2. **Robustness:** Gauge how well your business is positioned to absorb the coming shocks, in comparison to your direct competition. Do you have a more robust financial position, infrastructure, culture and leadership, customer loyalty or supply chain? This assessment should lay bare any areas for improvement.

3. **Adaptivity:** In a world of disruption intervals, you should be able to react dynamically to the shocks that will come, and transition seamlessly (e.g. from physical to digital) during the lulls in between, adapting your business model if necessary. Achieving that capability is a great step forward; achieving it faster than your competition will take you even further.

By addressing these points, business leaders can form a strategy that will be executed in the next six months – one that's logically supported by the statistics being gathered now. The pandemic has brought a myriad of questions and not enough answers so far, but it is possible to prepare as you recover. Companies that better understand the impact of future disruptions and invest in being robust and adaptive will not only survive, but thrive in a (post-)COVID-19 world.

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