

# Leapfrogging from the COVID-19 crisis

## A call for action for governments, knowledge institutes and private sector

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## **Crisis: “A time of intense difficulty or danger, a time when difficult and important decisions must be made”**

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Many expected 2020 to be a turbulent year, with increasing economic pressure, arising from ongoing trade disputes and geopolitical tensions, the aftermath of Brexit and slowing demand in China. However, none could predict the COVID-19 pandemic, causing an unprecedented social and economic global crisis. Spreading rapidly around the world, the virus is straining healthcare systems and creating an economic and social tragedy. Lockdowns, quarantines, travel restrictions and other measures, are severely affecting people's lives and business operations. Social isolation, business shutdowns, product shortages, unprecedented job losses and drops in gross domestic product (GDP) in many countries, take their toll on our society.

Although patient health and saving people's lives is -and should be- the primary concern, many government and corporate leaders are also assessing the long term implications of COVID-19, including disruptions caused in societies and industries. And they are right. As history teaches us, every crisis also brings opportunities. Not only to deal with the crisis itself, also to get out of it stronger as before and ahead of competition.

## **Disruption: “Disturbance or problems of preventing something from continuing as usual or as expected”**

### **MUST ACT**

Firstly, a crisis will cause a sense of urgency to act. Both in a re-active way, as well in a pro-active manner. Re-active to deal with urgent problems, minimize the negative implications and get back on your feet. Pro-active to prevent the same from happening again and minimize the effects if it does in the future.

### **CAN DO**

Secondly, new opportunities will arise because doors will open that have been shut before. Actions or changes that used to be impossible, are now open for discussion, as long as the price to be paid, is less impactful as the problems that could be solved by implementing it.

It is up to our leaders, in government, public sector, private sector and within our communities, to step up and leverage on the sense of urgency to follow new pathways, to challenge old systems and ideas and open the doors for innovation!

## **Innovation: “Applying new methods and ideas, introducing new products or services”**

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## HISTORY REVEALS: THE BRAINPORT EINDHOVEN CASE

Brainport Eindhoven is a European Top Technology region of stature, specialized in the most complex high-tech equipment, open innovation, research & development and design. With a long tradition in manufacturing, the region found itself in a rather vulnerable position in the 1990's, with two large companies (Philips Electronics and DAF Automotive) providing most of the jobs. In the mid-nineties, an economic crisis hit the Eindhoven region hard, when Philips restructured its operations, laying off tens of thousands of people, and DAF went bankrupt.

Caused by the effects of globalization of production and supply chains, as well as changing consumer markets around the world, an unprecedented number of people in the Eindhoven region lost their jobs. Approximately one out of every three households in the City of Eindhoven were directly affected, which called for strong and immediate action.

It was under these circumstances, that the Mayor of the City of Eindhoven invited the chairman of Eindhoven University of Technology as well as the chairman of the Eindhoven Chamber of Commerce, to join forces and collectively work on an approach to cope with the crisis situation. Without knowing it at that time, they laid the foundation for the famous Triple Helix collaboration model, in which government, knowledge institutions and private sector jointly work together on a shared vision and strategy.

At first, the focus of this collaborative approach was mainly on responding to the situation, alleviating the pain and mitigating the downfall. Two programs were developed to tackle the industrial decline in the region, the first one focusing on job creation and strengthening of the industrial fabric, and the second one a strategic action plan on industrial innovation, labor skills and diversification of the knowledge industry.

When these programs delivered their results, regional leaders began to rethink the future of the region's industrial ecosystem. To become more resilient to future changes, the ambition had to be shifted from 'getting up' towards 'getting in front'. Driven by optimism, they wanted to grab opportunities and leverage on existing strengths to the maximum, to become globally competitive and among the best in the world on some very specific, carefully selected areas of expertise. This resulted in the first 'Brainport' program, focusing on the development and completion of value chains in spearhead sectors of technology valorization (life sciences & medical technology, high tech systems and creative industries).

Since then, the Brainport Eindhoven region and its economic board, have been reinventing its strategy over and over again. In good times, as well as during crises, with innovation and adaptivity as its guiding principals.

### **LOOKING BACKWARDS, THE SUCCESS OF BRAINPORT EINDHOVEN'S TRANSFORMATION, IS BUILT ON A FEW ESSENTIAL 'MIND SHIFTS':**

- A shift from reactive response, fighting the immediate effects of the crisis, towards proactive development, to chase opportunities;
- Triple Helix collaboration of government, knowledge community and business community, with a bold ambition and a joint approach based on trust, openness and leadership;
- Adaptivity, accepting the fact that things MUST be done differently, as things will keep on changing and thus creating a sense of urgency to continuously reinvent yourself;
- Focus on specific targets, making bold choices, based on strengths and opportunities which CAN take you to the next level.

## COVID-19

In several ways, the approach to fight the COVID-19 pandemic and its devastating economic effects, holds similar patterns as the way Brainport Eindhoven emerged from the 1990's economic crisis. Many experts, researchers and leading consultancy firms around the world, have proposed a multi-step approach, which can be summarized along three distinctive strategic paths, starting with a re-active approach and gradually moving forward in a more pro-active strategy:

### 1. RESPOND

Contain the outbreak and address the immediate challenges caused by it, get back to 'normal' and prevent the same thing to happen again;



### 2. RETHINK

Accepting the fact things will never be the same, imagine what the 'new normal' looks like and what changes should be made;



### 3. REINFORCE

Refresh current strategies and business models to better perform in the 'new normal' and grab opportunities arising from the situation.



As mentioned before, the effects of the COVID-19 pandemic have been unprecedented. Infection numbers and fatalities keep on rising, millions of people have lost their jobs, businesses went bankrupt, whole cities and countries were put in lockdown, creating demand shocks in economies and emotional distress in societies. Government interventions are accepted to take drastic measures to ensure our safety. And at the same time, people are worried about the economic effects and how to prevent the global economy to collapse.

Governments, institutions and businesses **MUST** (re-)act on these effects and the inevitable changes resulting from it: Social distancing requires a 'contact-free' society and economy, consumer behavior is changing, online shopping and services are rising more rapidly as ever before and global supply chains will shift to mitigate risks against higher costs. At the same time, opportunities are opening up, that **CAN** be put to the benefit for companies, institutions as well as for regional ecosystems and national economies.

Never before, we have seen a digital revolution taking place this fast. All over the world, people are working from their homes, arranging virtually all meetings online. Even the most conservative organizations, with a tendency to fear and resist digitalization, now have accepted the inevitable.

Educational systems in many countries around the world, both developed as well as less-developed, managed to make the shift to online learning for all students, from the academic level all the way down to primary education for our youngest children. Many policymakers could only dream about this transformation before COVID-19 forced us to act on it. This could be a turning point to transform educational systems to become future ready. Lifelong learning, 21st century and digital skills can finally be adopted on a wider scale, to educate the workforce of the future.

With the availability of the right skilled talent as the most critical factor in economic development and investment attraction, countries and regions can now step up the game and start reskilling those who lost their jobs in the current crisis, to meet the requirements of tomorrow's industry.

Another eye opener is the implications of the current situation on sustainability. Lockdowns around the globe have put our regional, national and intercontinental air and road traffic to a stop. Oil and energy consumption dropped significantly, congestion problems dissolved into thin air and air quality in many of our over-crowded urban and industrial centers has improved drastically. Although things will probably return to 'normal' as the pandemic dies out, policy makers, organizations and individuals, should take a lesson from this or at least get inspired to make real steps towards a more sustainable world.

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## THIS IS THE MOMENT!

While there is no playbook for this COVID-19 crisis, the first step in managing a crisis is always getting the response right. However, besides **RESPONDING** to the current crisis, now is the time to **RETHINK** and **REINFORCE** your strategies, to become more resilient and competitive for the future.

The rebound from this crisis will start at different times by geography, or country, and the duration will vary by the nature and magnitude of the disruption by geography or industry. Given the complexity of the pandemic, the recovery phase for COVID-19 will definitely require high levels of collaboration and coordination, during what promises to be a challenging and potentially protracted recovery period.

To accelerate the road to recovery, leaders need to instill a spirit both of purpose and of optimism, and make the case that even an uncertain future can, with the right effort, be a better one.

Ultimately, choices must and will be made: To keep on doing certain things and not do others, to speed up or delay investments, to reorganize, to hold firm, or to invest for the future and reinvent yourself. Confronting uncertainty will not make tough decisions less difficult. It should, however, help to make better decisions that may have been inevitable in any case but are now likely to occur far faster than they would otherwise.

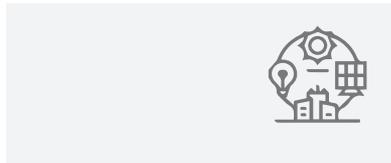
Two mindsets should be leading the way:

**ADAPT** - the sense of urgency caused by the pandemic and its aftermath **MUST** be used to transform to become resilient and more competitive.

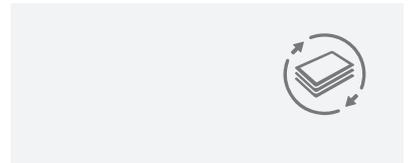
**INNOVATE** - doors are opened that were closed before, new opportunities pop up and **CAN** be embraced in a new manner.



For **COMPANIES AND INSTITUTIONS**, resiliency -the ability to absorb a shock, and come out of it better than their competition- will be key to survival and long-term prosperity. After rebuilding operations, existing business models should be challenged and organizations should be re-evaluated on their efficiency. Transformational processes -including digitalization- should be accelerated and opportunities should be grabbed with a start-up mindset.



At **(REGIONAL) ECOSYSTEMS** level, reforms should be led by the adoption of global trends, both existing before as well as originating from the COVID-19 crisis. Digitalization of industrial processes, Industry 4.0 and industrial IoT will gain more momentum, as the global battle for talent will further determine tomorrows hotspots of economic recapturing and growth. Global supply chains will experience shifts, which can pose serious threats to existing ecosystems and at the same time can be leveraged on to strengthen existing or even create new ecosystems.



At a **(NATIONAL) ECONOMY** level, policy makers should be open and flexible, to adapt strategies and invest in both necessary actions ('must do's') as well as new opportunities arising from the situation ('can do's'). Policies and budgets should be put to work to offer support and incentives to businesses and institutions to transform themselves for the 'new normal'. Administrative procedures should be simplified to speed up processes and national education systems should be reformed, leveraging on recent events and preparing for the post COVID-19 era.

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## GLOBAL OPPORTUNITIES ARISING FROM COVID-19

Over the last decades, the world has experienced rapid globalization, with disappearing trade barriers, shortening of distances between people and bringing prosperity for many, while creating more inequality at the same time.

The challenges faced in developed countries and emerging economies are very different. Still, both can profit from the current situation

**“Those who step up their game will be better off and far more ready to confront the challenges - and opportunities - of the next normal than those who do not”**

The biggest opportunities will probably arise from shifts in global value chains. Many businesses faced an initial supply shock, especially for goods sourced from China, followed by serious demand shock as more and more countries ordered people to stay at home, affecting consumer behavior drastically.

**1. RESHORING** - Bringing back outsourced parts of the value chain into (home)countries of multinational companies to diminish dependency on manufacturing countries;

**2. NEARSHORING** - Moving parts of the value chain to nearby countries, combining lower-cost organization with geographical and cultural proximity to reduce (logistic) risks;

**3. REGIONAL SPREAD** - Bringing part of the outsourced activities of multinational companies to other countries (especially outside China) to lower the risk of disruption in case China faces another crisis;

The most likely scenario will be a combination, not completely reforming global supply chains, but merely mitigating the risks. The leading model of cost-driven “Just in Time”, will probably shift to a more conscious “Just in Case” strategy, with alternative sourcing options in case of unexpected disturbances. Looking for new secure sources of supply, global firms will keep in mind how countries have responded to COVID-19 and weigh this against countries’ other advantages, such as trade deals, existing technology base and competitive labor costs.

The COVID-19 pandemic revealed the fragility of the modern global supply chains. The devastating economic impact is shown as week-on-week trade in China, US and Europe halved because of the crisis. Multinational companies are suddenly faced with discontinuity, affecting the stability of their operations, and manufacturing economies are confronted with their dependency on foreign capital and knowledge.

Now that the vulnerability of complex global supply chains, based on lean manufacturing principles, has been exposed, changes and shifts can be expected.

The dependency on Chinese manufacturing and the risks of cost-driven, single sourcing supply chain models, call for actions. Many international researchers and business experts try to identify trends and predict changes, leading to a number of different scenarios:

**4. MULTIPLE SOURCING** - Contracting more suppliers for the same activities or products to mitigate the risks of single sourcing (against higher costs);

**5. IN-HOUSE PRODUCTION** - Bringing back outsourced activities (or capabilities) into the multinational company or its subsidiaries, to keep control in case of external disturbances;

**6. STOCK** - Raise the stock level of components and semi-finished product to lower the impact of supply shocks (expensive, least favorable).

One thing is certain, global firms will diversify their supply chain, instead of solely relying only on China. This trend was already happening with the U.S. trade war with China and rising relative costs in China itself. However, besides adding another location in Asia (known as the ‘China plus one’ strategy), countries like Japan and India are now also offering land and money to encourage businesses to move all their manufacturing out of China. Either way, it is likely that manufacturing hubs such as Vietnam are to benefit from this shift.

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From a risk management perspective, global firms will focus their strategies on building a “resilient” supply chain that not only seeks to reduce risks but also is prepared to quickly adjust and recover from any unanticipated supply chain disruptions that might occur in the future. Large scale geographic shift in production on the short term seems likely to be limited by the associated costs and logistical issues. However, in the medium and long term there will be significant shifts, that holds opportunities for both developed countries, as well as emerging economies:

For **DEVELOPED COUNTRIES**, one of the most pressing challenges nowadays is the growing equality in its societies. In Western free-market economies, inequality inevitably rises faster than growth. As the incomes of the rich become reliant more on asset wealth than on salaries, the old forms of redistribution, based on income tax and corporation tax, cease to work. A growing part of the population, lower educated and without assets, see the cost of living growing faster than their own household incomes. Outsourcing of lower added value production and the corresponding jobs, combined with increasing automation of remaining production, have made it harder for them to compete on the labor market to find meaningful jobs.

Therefore, policy makers in these countries will favor especially reshoring and in-house production. These will serve not only the economic resilience of domestic companies but at the same time, contribute to tackling social challenges.

However, there are components and technology where the knowledge and the capabilities nowadays are only in Asia. Not only China, or South Korea, or Japan, but now also possibly in countries like Vietnam. To relocate this into Europe is not feasible, because you not only have to move over the equipment and the plant and everything, you also need to build the capability. Europe and the U.S. do not have the people anymore who are able to do this. Therefore, this will take much longer.

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**“It is to be expected that both returning lower added value activities to developed countries, as well as bringing higher value added activities to emerging countries, will both be part of the post COVID-19 strategies”**

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For **EMERGING ECONOMIES**, one of the most pressing challenges, is the risk of falling into the middle-income trap, referring to the phenomenon where rapidly growing economies stagnate at middle-income levels and fail to transition into a high-income economy. As underemployed labor force pools drain out because of the rapid economic growth, wages begin to rise, eroding competitiveness. When at the same time, these countries fail to leap forward on capacity building, innovation and entrepreneurship, dependency on foreign capital, knowledge and technology will remain high, preventing GDP growth based on domestic added value. Obviously, policy makers in these countries will focus on attracting higher added value activities, which might contribute to raising R&D and innovation, as well as technology transfer to domestic firms. Regional spread and multiple sourcing within global supply chains can offer just the opportunities to achieve this.

Therefore, a combination of supply chain strategies as described before, might offer opportunities both for developed countries as well as for emerging economies. And while developed countries have a clear advantage from the leading position of their multinational companies within numerous global value chains and the availability of investment capital, emerging countries hold an asset that might prove to be even more powerful: **The fastest growing consumer markets!**

To prevent disturbances of their business processes, multinational companies will not solely focus on bringing back global supply chain activities to their home countries. In case of a global crisis, exporting their goods to growing consumer markets in emerging countries, especially in Asia, will face difficulties the same way as importing their supplies now is troubled by COVID-19. Therefore, they will also try to establish complete end-to-end value chains as close to these emerging markets as possible.

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## CALL FOR ACTION

Given the differences between developed and emerging countries, there is no such thing as a blueprint how to move forward in the post COVID-19 era. Even between different developed countries or emerging economies, many specific factors regarding the impact of the COVID-19 pandemic on public health, economic system and society, as well as the existing economic and social structures, define specific challenges as well as required actions to take. Especially in the **RESPOND** phase, where immediate action to contain the outbreak and its direct effects is required.

However, for the next phases, **RETHINK** and **REINFORCE**, policy makers and decision makers, should take in consideration some general strategic approaches.

First of all, the sense of urgency caused by the pandemic and its aftermath **MUST** be used to transform existing economic and social systems to become resilient and more competitive (ADAPT).

And second, one should realize doors are opened that were closed before, creating new opportunities that are popping up and **CAN** be embraced in a new manner (INNOVATE).

In **DEVELOPED COUNTRIES**, especially the sense of urgency created by the COVID-19 crisis should be leveraged on. Over the last decades, administrative procedures and politics have shown to be getting more and more complex, slowing down decision making processes and thus negatively affecting global competitiveness. Now is the time to cut down bureaucracy and speed up selected investments and policies, which are aimed at transforming systems to become more resilient, more competitive and more innovative. Having a competitive advantage by their long standing academic history and reputation, now also is the time to foster local skills and 'protect' local knowledge.

**FOR EMERGING ECONOMIES**, leapfrogging on the opportunities brought by the disturbance of global value chains should be the highest priority. Low cost labor nowadays is getting less important, remaining only a significant factor in less than 18% of global trade. Therefore, policies and strategies to attract and establish higher value added activities, including public and private R&D and domestic innovation, should be speeded up and implemented on the shortest notice. Obviously, this also require capacity building by reforming and upgrading educational systems and reskilling of the existing workforce.

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## RECOMMENDATIONS

Besides the general strategic advice for developed countries and emerging economies, we like to share 5 recommendations, based on our knowledge, research, use cases and previous experience. We call out to policymakers and decision makers, both from public as well as private sector, governments, private companies, investors, education and research institutions, to act on the following on the shortest possible notice:

### 1. ACCELERATE DIGITALIZATION

We have all witnessed the ability to go digital. Online education, online meetings, working from home, have never shown an adoption rate higher than in the last few months. And since we all know digitalization is one of the leading megatrends in our economy, industry and society, changing the way we work and live, now is the time to jump forward instead of going back to the 'old normal'. A no-brainer which requires us all to not only adopt digital technologies (including Industry 4.0 and Industrial Internet of Things), but also build skills in our workforce and across all levels of our societies, facilitated by investments in even better digital infrastructure, accessible to all.

### 2. RESKILL THE WORKFORCE

The global battle for talent has proven to be one of the most determining factors in investment decisions, thus we have to provide our workforce with the right skills for the future. This does not only mean improving and reforming our educational systems which guarantees the long-term supply of talent. It also means upgrading the skills of our existing workforce by implementing lifelong learning paths. The current job losses many of our citizens are facing also brings the opportunity to put up reskilling programs, offering new perspective on meaningful labor for those in need and accelerating the availability of right skilled talent on the short term.

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#### 4. RETHINK ECOSYSTEMS

Since value chains and production have gone global, it is not enough to act solely on country level and national policies. Global competition in value chains will take place between ecosystems, consisting of a strong, interlinked network of large and small companies, knowledge institutions and start-up communities. Connecting research talent and manufacturing capacity is key to innovation.

For better or worse, COVID-19 is accelerating the evolution of manufacturing. The manufacturing ecosystems that will prosper in the post COVID-19 era, are those that are already drawing key learnings from this pandemic and its impact and preparing for the next step.

Dare to make choices and focus on building networks, fostering innovation as well as specific strengths and competences, which have a competitive advantage over others to attract and retain investors, partners and talent. Study their specific demands to connect and (re)build excellent, open innovation ecosystems, fit for the future.

#### 3. TRIPLE HELIX COLLABORATION

All stakeholders should collaborate to act now! Each has its own role and responsibilities, which combined to a shared ambition and appealing vision, can make the difference for all. Governments have to put in place the appropriate policies, public funding and infrastructure, while at the same time speeding up administrative procedures and cutting the red tape. Education and knowledge institutions should provide talent and skills, research and development, as well as technology transfer to local companies to innovate. The private sector on its turn should provide prosperity (jobs) and investment capital. Collaboration should be built on trust, openness and leadership, resulting in commitment from all.

#### 5. ACT INCLUSIVE

Never forget for whom we take these actions Our society, our citizens, are the foundation of our success. Their prosperity, well-being and quality of life are key contributors to economic, social and environmental sustainability. Therefore, the people should be engaged in our strategies. Invite them to participate in the process and co-create their own future.



Joost Helms and Peter Portheine are founders and directors of the Eindhoven International Project Office (EIPO), an international advisory on socio-economic strategies and transformations, Triple Helix collaboration and governance models, successful innovation ecosystems, Smart Cities, FDI attraction & relocation and post COVID-19 recovery plans.

At this moment, EIPO is working on projects in Binh Duong - Vietnam, Eastern Economic Corridor - Thailand and Smart Belfast - Northern Ireland. For more information on the authors and on EIPO's activities and services: [www.eipo.nl](http://www.eipo.nl)

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