Restarting Central Europe

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The Covid-19 pandemic is a humanitarian crisis that requires saving lives while safeguarding livelihoods. The virus has spread worldwide despite containment efforts. Never before has the global economy shut down, much less reopened, in the setting of an ongoing pandemic. All major economies have been hit hard: as an example, the impact of Covid-19 in the USA exceeds anything since the end of WWII. In a global survey among ~2,000 executives, the largest group of respondents said they expected a muted economic recovery with possible return only in 2023.[1]

As many countries grapple with a resurgence of infections, the immediate task ahead of us is to mitigate the pandemic and prevent healthcare systems from being overwhelmed. In this article, we focus on the next economic normal, which is characterized by a rapid pace of digitization and the imperative to increase productivity. We present six topics in which Central European countries[2] need to progress in order to succeed and selected practical examples to initiate discussion about these topics.

1) SMIT, Sven, Martin HIRT, Kevin BUEHLER, Susan LUND, Ezra GREENBERG and Arvind GOVINDARAJAN. In the tunnel: Executive expectations about the shape of the coronavirus crisis. *McKinsey* [online]. 14. 4. 2020 [retrieved on: 2020-09-28]. Available at: https://www.mckinsey.com/business-functions/strategy-and-corporate-finance/our-insights/in-the-tunnel-executive-expectations-about-the-shape-of-the-coronavirus-crisis.

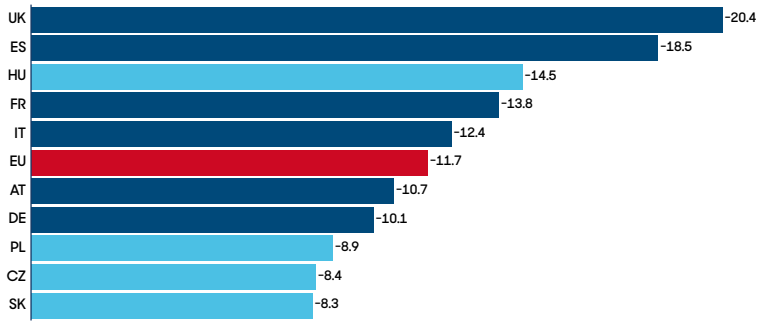
2) This article focuses on the Czech Republic, Hungary, Poland, Slovakia, and Austria calling these countries together "Central Europe" or "CE".

Covid-19 Effects on the Economy of Central Europe

Covid-19 created an economic crisis with a sharp drop of Q2 GDP driven by reduced consumption and delayed investments. CE countries seem to have fared comparatively well with Q2 GDP decreasing in Austria by 10.7% and in Czech Republic by 8.4%, vs. 11.7% in the EU.[3]

Chart 1: Real GDP growth in 2020 Q2 vs. Q1

Source: Eurostat



Most of the CE countries were impacted less than the EU average, with Hungary being an exception.

To help restart their economies, governments have approved unprecedented support measures. In addition, the EU has dedicated EUR 750 billion to support the recovery through *Next Generation EU;*[4] the budget and funds are already in place. Despite the size of the support, the drawdown mechanism needs to be managed to enable effective access and allocation of capital. Plan development is already in progress at the national level and addresses the topics discussed in this article.

How deep the crisis will be and how fast the economies will recover is still being debated. Research shows that ending lockdowns alone does not fully restore confidence or economic growth. That will happen only when the virus is under control. In countries with "near zero" cases, economic activity has returned to normal; in the others, it is still lower than before the pandemic.[5] In recent consumer research conducted in the summer, only around 30% of those surveyed said they felt safer when government restrictions were lifted. Three other indicators would help people feel safer: seeing people wearing masks, the number of new cases decreasing in their area, and national public-health leaders saying it is safe

3) GDP and employment flash estimates for the second quarter of 2020. *Eurostat* [online]. 14. 8. 2020 [retrieved on: 2020-09-28]. Available at: https://ec.europa.eu/eurostat/documents/2995521/10545332/2-14082020-AP-EN.pdf/7f30c3cf-b2c9-98ad-3451-17fed0230b57.

4) *Europe's moment: Repair and prepare for the next generation* [online]. 27. 5. 2020 [retrieved on: 2020-09-28]. Available at: https://ec.europa.eu/commission/presscorner/detail/en/ip_20_940.

5) STAPLES, Mark, ed. COVID-19: Implications for business. *McKinsey* [online]. 23. 9. 2020 [retrieved on: 2020-09-28]. Available at: https://www.mckinsey.com/business-functions/risk/our-insights/covid-19-implications-for-business.

to reengage.[6] Until a safe and effective vaccine is available, a "near zero" outcome requires a highly effective program of testing, tracing, isolation of cases, and quarantining contacts.

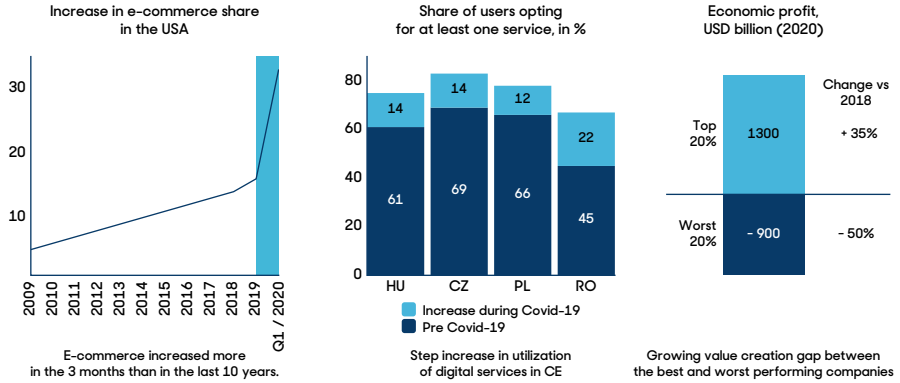
The Next Digital Normal Is Emerging

In the months of the Covid-19 pandemic, digitization has leaped forward. In the US, e-commerce grew more in three months than over the last ten years. Personal meetings have moved to the virtual space, remote work, and to some distance learning, has become a reality for a large share of the population. Consumer behavior has also changed significantly due to the fast adoption of digital channels.

In Central Europe, the number of digital service users has exploded: for example, in the Czech Republic, it increased by 14 percentage points to 83%. In the first five months of 2020, the digital economy in Central Europe grew by 14.3%, compared to an annual growth of 7.8% in 2017–2019.[7]

Chart 2: Digitalization

Source: McKinsey



The next digital normal raises the stakes for both companies and governments. In the corporate world, the gap between the most and the least performing companies has widened. While the top 20% improved value creation by 35%, the bottom 20% increased

6) CHARUMILIND, Sarun, Ezra GREENBERG, Jessica LAMB and Shubham SINGHAL. Covid-19: Saving thousands of lives and trillions in livelihoods. *McKinsey* [online]. 17. 8. 2020 [retrieved on: 2020-09-28]. Available at: https://www.mckinsey.com/industries/healthcare-systems-and-services/our-insights/covid-19-saving-thousands-of-lives-and-trillions-in-livelihoods.

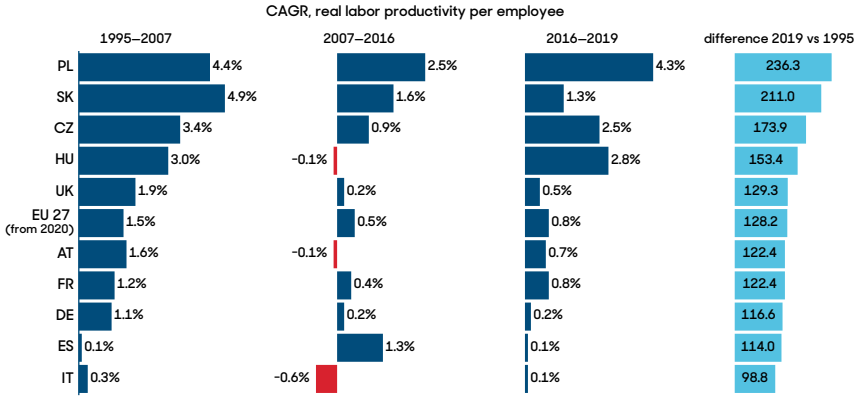
7) *Digital Challengers in the Next Normal*, report by McKinsey (published on 15 October 2020).

value destruction by half compared to 2018.[8] Governments are faced with the imperative to quickly transform and digitize their countries or be left behind in a "winner-takes-all" digital world. Compulsory school education online and remote patient-doctor interactions, which only a year ago seemed futuristic prospects, are now a reality. Future well-being will be determined by how quickly countries can adapt and raise productivity by a mix of capital, education/knowledge, and institutions.

Despite convergence, CE countries except Austria still face a large productivity gap in comparison to EU 15[9] countries or even to EU average. Moreover, their productivity growth has somewhat slowed after the financial crisis.[10]

Chart 3: Labor productivity comparison (growth over periods)

Source: Eurostat



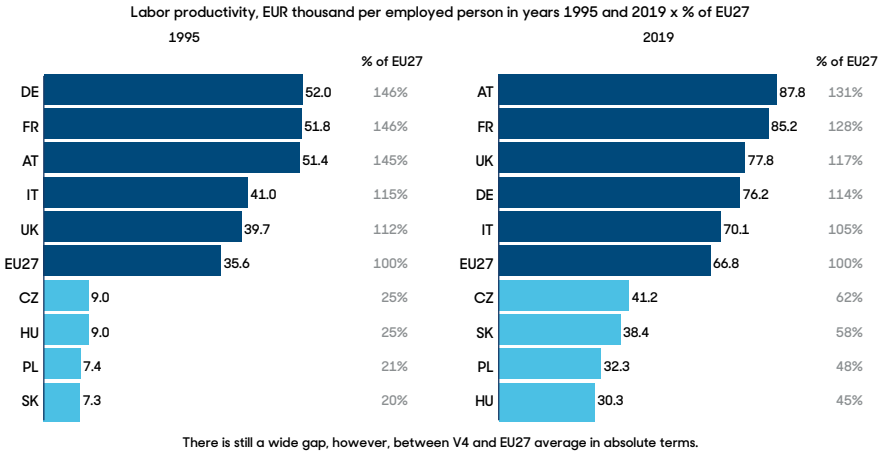
8) BRADLEY, Chris, Martin HIRT, Sara HUDSON, Nicholas NORTHCOTE and Sven SMIT. The great acceleration. *McKinsey* [online]. 14. 7. 2020 [retrieved on: 2020-10-03]. Available at: https://www.mckinsey.com/business-functions/strategy-and-corporate-finance/our-insights/the-great-acceleration.

9) Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Spain, Sweden, United Kingdom.

10) Labor productivity and unit labor costs. *Eurostat* [online]. [retrieved on 2020-10-06]. Available at: https://ec.europa.eu/eurostat/web/products-datasets/product?code=nama_10_lp_ulc.

Chart 4: Labor productivity country comparison in absolute terms

Source: Eurostat



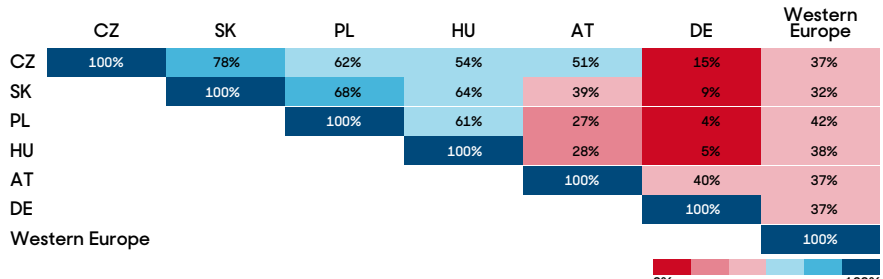
There is still a wide gap, however, between V4 and EU27 average in absolute terms.

Looking at what holds individual countries back, we found that CE countries are relatively similar in their strengths and weaknesses on the individual factors of the *Global Competitiveness Index*.[11] CE countries have much higher correlations of scores among one another than with 15 Western European countries.

11) SCHWAB, Klaus. The Global Competitiveness Report 2019. *World Economic Forum* [online]. 2019 [retrieved on: 2020-10-06]. Available at: http://www3.weforum.org/docs/WEF_TheGlobalCompetitivenessReport2019.pdf.

Chart 5: Correlation between countries on the pillars of the Global Competitiveness Report

Source: The Global competitiveness index; World bank



Pillars	Components
1st pillar: Institutions	Social capital, Budget transparency, Freedom of the press, Burden of government regulation, E-Participation
2nd pillar: Infrastructure	Railroad density, Airport connectivity, Electricity access, Reliability of water supply
3rd pillar: ICT adoption	Fixed-broadband Internet subscriptions, Fibre Internet subscriptions, Internet users
4th pillar: Macroeconomic stability	Inflation, Country bond ratings, Government debt to GDP
5th pillar: Health	Healthy life expectancy, Mean years of schooling
6th pillar: Skills	Quality of vocational training, Skillset of graduates, Digital skills among active population, School life expectancy, Pupil-to-teacher ratio in primary education
7th pillar: Product market	Extent of market dominance, Competition in services, Trade tariffs, Redundancy costs, Hiring and firing practices
8th pillar: Labor market	Cooperation in labor-employer relations, Active labor market policies, Internal labor mobility, Pay and productivity, Labor tax rate, Financing of SMEs
9th pillar: Financial system	Venture capital availability, Market capitalization, Credit gap, Gross domestic product
10th pillar: Market size	Cost of starting a business, Time to start a business
11th pillar: Business dynamism	Insolvency recovery rate, Growth of innovative companies, Diversity of workforce
12th pillar: Innovation capability	International co-inventions, University-industry collaboration in R&D, Scientific publications, Patent applications, Research institutions prominence

For example, the Czech Republic and Austria both score high in ICT adoption, financial systems, and innovation ability. Despite a similar railroad density, there are differences in the quality of transport infrastructure. The biggest differences are visible in institutions and education.

CE countries can benefit from sharing approaches to improve common weak areas. They are all grappling with public sector digitization. Individual countries can be a source of inspiration for each other whenever there is a clear "local champion". For example, Austria leads in infrastructure and environment protection, and Poland has experience with educational reform that has delivered significant improvement in outcomes.[12]

In light of the Covid-19 pandemic, CE countries need to revisit their priorities. This can be seen, for example, with *The Country for the Future* strategy of the Czech Republic, which sets a goal to be within the top 20 most developed countries in the world, with a focus on "added value". While the goal and many topics such as education, physical infrastructure,

12) JAKUBOWSKI, Maciej. *Opening Up Opportunities: Education Reforms in Poland* [online]. Instytut badań strukturalnych, 2015 [retrieved on: 2020-10-06]. Available at: https://ibs.org.pl/app/uploads/2015/02/IBS_Policy_Paper_01_2015.pdf.

environment protection, and labor market re-skilling remain relevant, Covid-19 has raised the importance of digitization and healthcare reform.

CE Digital Normal: A Unifying Set of Topics with Country-Specific Answers

A common set of topics is emerging for CE countries from the analysis of their competitiveness. Some of these topics are old (e.g., education, transport infrastructure), others have been emerging (e.g., decarbonization, government digitization, re-skilling/upskilling), and some came into focus because of Covid-19 (e.g., healthcare). While the topics are common among CE countries, the starting positions are different and the answers are unique. The next normal is the time for international cooperation, and countries should take time to reflect on their direction and try to learn from each other.

The topics to act on are:

- Quickly digitize all government services, creating an open ecosystem
- Switch from knowledge-based to outcome-based education
- Achieve labor market re-skilling/upskilling
- Set an ambitious decarbonization goal
- Improve health by prevention through primary care and telemedicine
- Strengthen key transport infrastructure by accelerating projects.

In the rest of this article, we elaborate on each of these topics in greater detail.

Quickly digitize all government services, creating an open ecosystem

The Covid-19 pandemic strongly accentuated the need to digitize in both the public and private sectors. There was a strong case for digitization even before Covid-19. The potential economic benefit of digitization is up to EUR 200 billion in additional GDP by 2025 in Central and Eastern Europe.[13] This economic boost would lead to greater global competitiveness and prosperity for the region's 100 million people.

While some private sectors lead the digitization wave (e.g., IT and banking), digitization of government services has been progressing at a slower pace. Some of the key fundamentals for digital growth, such as education, tech ecosystem, and digital infrastructure are on a negative trajectory across CE countries.[14] Most governments are far from capturing

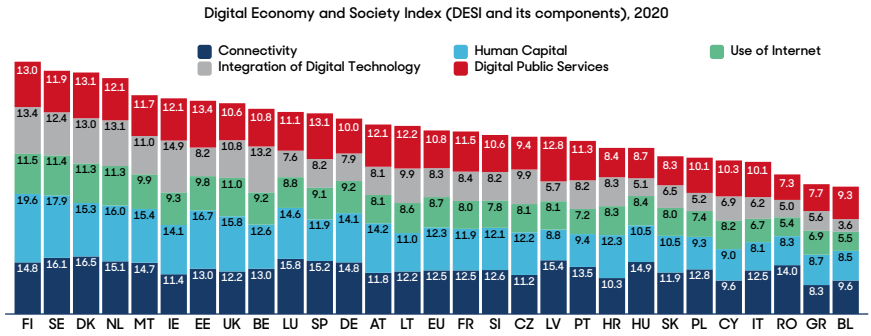
13) NOVAK, Jurica, Marcin PURTA, Tomasz MARCINIAK, Karol IGNATOWICZ, Kacper ROZENBAUM and Kasper YEARWOOD. *The Rise of the Digital Challengers* [online]. 2018 [retrieved on: 2020-09-28]. Available at: https://digitalchallengers.mckinsey.com/files/McKinsey%20CEE%20report_The%20Rise%20of%20Digital%20Challengers.pdf.

14) *Digital Challengers in the Next Normal*, report by McKinsey (published on 15 October 2020).

the benefits of digitization. As an example, Austria and the Czech Republic rank 13th and 17th in the Digital Economy and Society Index (2020).[15]

Chart 6: Comparison using the Digital Economy and Society Index (DESI)

Source: DESI Index, Eurostat



To move e-government to the next level and achieve excellence, effective governance needs to be established, next-generation technologies deployed, and customer journeys for digital services transformed. In doing so, governments should aim to develop an open ecosystem of private providers that could enhance the user experience by extra services at various steps of the customer journey.

These steps may support the establishment of private providers:

- **Set up a body to oversee the design and implementation** of the entire ecosystem of the ICT portfolio. Such an entity would be responsible for engaging and activating key ICT leaders, for developing a vendor marketplace, and for overseeing delivery.
- **Set up a "CEE Digital Agency",** which would support national bodies with country ecosystem development with the ultimate goal of creating a single digital market in Central and Eastern Europe.
- **Establish an agile Development Operations (DevOps)** and adopt new infrastructure and technology to ensure the security and efficiency of processes.
- **Focus on customer journeys and customer experience** to build the service in cooperation with users and enable high adoption rates and usability.

15) The Digital Economy and Society Index (DESI). *European Commission* [online]. 19. 6. 2020 [retrieved on: 2020-10-06]. Available at: https://ec.europa.eu/digital-single-market/en/desi.

DubaiNow is a practical example of an e-government service application. It provides a one-stop portal based on a digital services ecosystem that provides digital access to more than 120 services across ten key areas. The ecosystem also includes easy access to services from a number of private companies – utilities, telecommunications, and even real estate agents. Using the application, people can pay their local bills, settle traffic fines, renew car registrations, or apply for residency. While the Dubai situation is specific, CE countries and cities can learn from some features and approaches. For example, *DubaiNow* is built with Mobile First philosophy, and citizens were invited to participate in the design creation.[16] The *DubaiNow* app is discussed in more detail in the article *City Strategies – Getting Back to the Next Normal*.

Switch from knowledge-based to outcome-based education

Already before the start of the crisis, there was significant room for the improvement of education in the Czech Republic and Austria. Both countries experienced a decline in mathematics and science scores. In contrast, Poland was able to increase its scores across PISA categories: science by 13 points and mathematics by 20 points.[17] This may be attributed to comprehensive educational reform in Poland that included, among other things, a teacher salary increase of 50% from 2006–2012, core curriculum reform in 2008, and a new evaluation system introduced in 2009.[18]

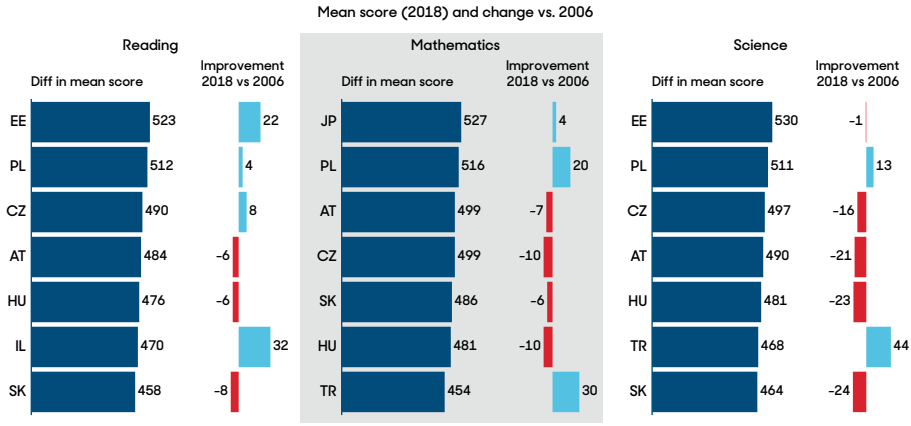
16) *Smart Dubai* [online]. [retrieved on: 2020-09-28]. Available at: https://www.smartdubai.ae/apps-services/details/dubai-now.

17) McKinsey analysis based on data provided by PISA (OECD – Programme for International Student Assessment).

18) JAKUBOWSKI, Maciej. *Opening Up Opportunities: Education Reforms in Poland* [online]. Instytut badań strukturalnych, 2015 [retrieved on: 2020-10-06]. Available at: https://ibs.org.pl/app/uploads/2015/02/IBS_Policy_Paper_01_2015.pdf.

Chart 7: Comparison of educational results

Source: OECD



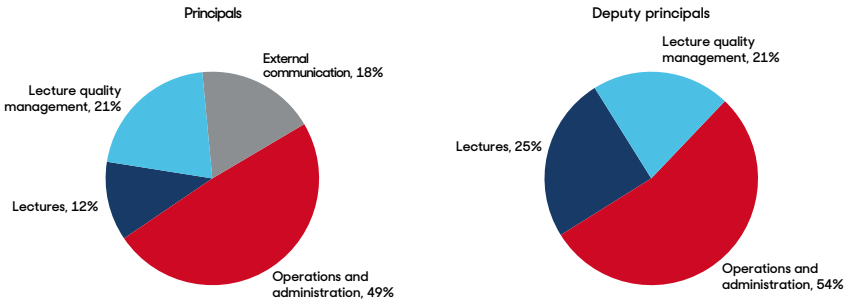
Between 2008–2018, Poland demonstrated substantial improvement across all three PISA dimensions.

In our 2010 study of the Czech educational system,[19] we indicated three main areas to focus on: quality and development of teachers, quality and development of school principals, and high standards and accountability for results. Unfortunately, in the ten years since publishing that report, there was no systemic change, and the identified problems still persist.

The pandemic showed that schools were generally unprepared for a crisis. Moving to digital delivery was a challenge with great variability across schools. School management played a key role, confirming the conclusion of our 2010 study that the quality of the principal is a key determinant of the quality of the school. Hence, in the next normal, we find it paramount to focus on the development of school principals. Our research has shown that school principals in the Czech Republic spend around half of their time on administrative tasks and operations and only 21% on managing the quality of education. In the best educational systems in the world, school principals spend more than 50% of their time managing the quality of education through coaching teachers on the quality of their delivery.

19) Decreasing results of Czech elementary and secondary education, facts and solutions. *McKinsey* [online]. 2010 [retrieved on: 2020-09-28]. Available at: https://www.mckinsey.com/cz/~/media/McKinsey/Locations/Europe%20and%20Middle%20East/Czech%20Republic/Our%20work/McKinsey_pro_bono_skolstvi.pdf.

Chart 8: Work time activities – principals and deputy principals, 2009
Source: McKinsey



Immediate improvements in principal effectiveness could come from:

- **Professional standards.** In Ontario, Canada, for example, school principals have clearly defined required skills, processes, and procedures for each of the areas on which they need to focus.
- **Selection and preparation.** The Singaporean system includes careful selection of school principal candidates (identifying suitable school leadership candidates in the first three years of a teacher's career), followed by a six-month course and a four- to six-year-long on-the-job educational program similar to an MBA. As one of the Singaporean leaders in the educational sphere said, "We teach teachers how to apply best practice. We teach school principals how to define it."[20]
- **Lower administrative burden.** Eliminate, standardize, or centralize certain areas (such as procurement); automate or delegate (reporting handed over to an assistant). Examples from companies indicate that the administrative burden can be lowered by 20–40%.[21]
- **Performance management.** School principals should be subject to proactive performance and consequence management (based on the quality of education and not only administrative matters), in which those who do not perform may be replaced.

Some of this would require systemic changes in the decentralized school governance (e.g., centralizing administrative activities on a district or regional level), whilst, for others, setting clear expectations and coaching school principals on priorities would suffice. The

20) Decreasing results of Czech elementary and secondary education, facts and solutions. *McKinsey* [online]. 2010 [retrieved on: 2020-09-28]. Available at: https://www.mckinsey.com/cz/~/media/McKinsey/Locations/Europe%20and%20Middle%20East/Czech%20Republic/Our%20work/McKinsey_pro_bono_skolstvi.pdf.

21) HEYWOOD, Suzanne, Dennis LAYTON and Risto PENTTINEN. A better way to cut costs. *McKinsey Quarterly* [online]. 1. 10. 2009 [retrieved on: 2020-10-06]. Available at: https://www.mckinsey.com/business-functions/organization/our-insights/a-better-way-to-cut-costs.

existing Czech regulation that offers school principals training is heavily focused on the operational and legal aspects of their function, such as relevant regulations or health and safety rules. In order to change the way school principals interact with students, teachers, government, parents, and other stakeholders, we need to start by formally redefining the expectations of their role and creating relevant upskilling programs.

Achieve labor market re-skilling/upskilling

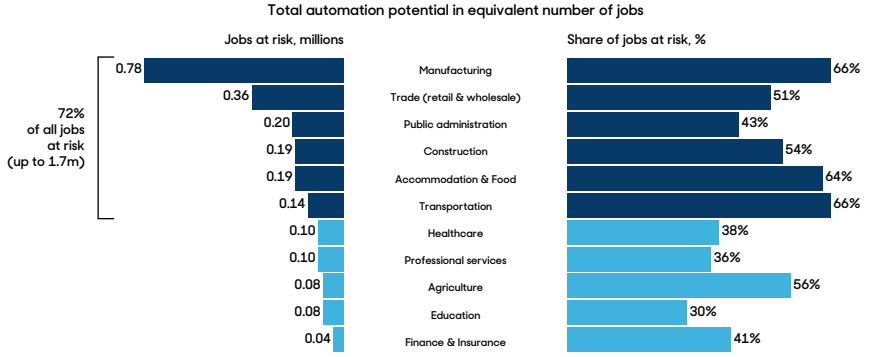
Most of the public debate on digital skills and learning focuses on education; there is little focus on re-skilling or lifelong learning, despite the fact that most of the labor force is no longer at school.

The economy's evolution and growth and the increasing speed of change create new requirements for the job market. Economies will need to enable the labor to adjust. Our global work task automation models predict that some 51% of workplace activities could be automated by already proven technologies. This number is as much as 66% in the manufacturing sector that provides most employment in the Czech Republic.[22]

51% of workplace activities could be automated by already proven technologies.

Chart 9: Overall potential for automation in the Czech economy

Source: McKinsey Global Institute



22) MANYIKA, James, Susan LUND, Michael CHUI, Jacques BUGHIN, Jonathan WOETZEL, Parul BATRA, Ryan KO and Saurabh SANGHVI. Jobs lost, jobs gained: What the future of work will mean for jobs, skills, and wages. *McKinsey Global Institute* [online]. 28. 11. 2017 [retrieved on: 2020-10-06]. Available at: https://www.mckinsey.com/featured-insights/future-of-work/jobs-lost-jobs-gained-what-the-future-of-work-will-mean-for-jobs-skills-and-wages.

This does not mean that 51% of people will necessarily lose their jobs: for most employees, this will mean a significant change in the way they work, including learning ways to leverage data and use machines. For others, we foresee a significant shift in professions in favor of growing sectors, such as remote business services centers or social care for elderly people. Those shifts will require learning new skills, mostly technological and advanced cognitive capabilities (e.g., analytical capability, creativity), interpersonal skills, flexibility, and an ongoing ability to adjust to the changing needs of the dynamic labor market.[23]

A step change is required instead of marginal improvements if we are to provide an upskilling and re-skilling program for 20–30% of the workforce over the next decade. An ideal battery of interventions would:

- build awareness of the job transitions that will be required, developed together in close collaboration with industry
- set up a new platform for upskilling/re-skilling programs
- provide transparent evaluation of the results of various programs
- offer incentives for employees to participate in such programs, for example, a possible link between unemployment benefits and participation in courses

Within the ecosystem, a broad variety of programs offered by both public and private providers should be considered, ranging from traditional short courses (e.g., a welding course, driving course) to traditional academic programs (e.g., undergraduate or graduate degree). However, it is important that other "mid-size" qualifications are also offered. For instance, a multi-month UX design or 3D printing training is easier to graduate from and will also ensure its graduate a higher-value-adding job in the future.

Singapore incentivizes its citizens to participate in courses to improve their professional skills. In the *SkillsFuture* program, citizens can choose from a list of training courses in the fields of data analytics, finance, technical services, digital media, cybersecurity, entrepreneurship, advanced manufacturing, and urban solutions. Through an "Earn and Learn" scheme, employers receive up to ~EUR 9,000 to finance training initiatives for those starting their professions, particularly in technical occupations. In *SkillsFuture Credit*, all citizens over 25 receive around EUR 300 in their training account to take approved courses (currently over 21,000 courses on offer).[24]

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23) NOVAK, Jurica, Marcin PURTA, Tomasz MARCINIAK, Karol IGNATOWICZ, Kacper ROZENBAUM and Kasper YEARWOOD. *The Rise of the Digital Challengers* [online]. 2018 [retrieved on: 2020-09-28]. Available at: https://digitalchallengers.mckinsey.com/files/McKinsey%20CEE%20report_The%20Rise%20of%20Digital%20Challengers.pdf.

24) *My Skills Future* [online]. [retrieved on: 2020-10-06]. Available at: https://www.myskillsfuture.sg/content/portal/en/index.html.

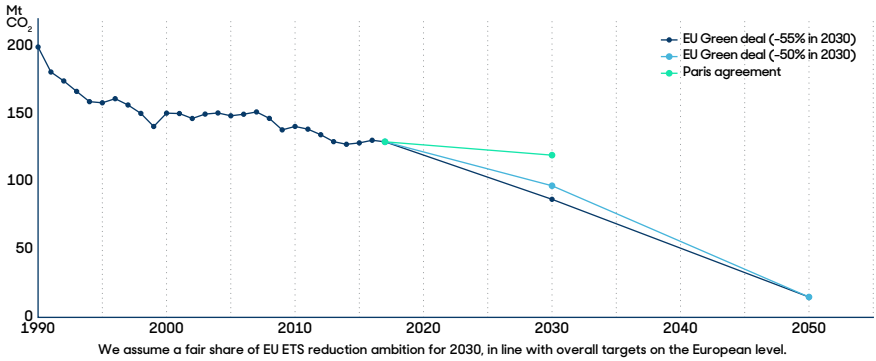
Turkey took re-skilling to the next level by launching ten "Model factories" that are focused on companies directly – the idea is to help transition companies to transition to Industry 4.0, enabling the digital transformation of facilities. The advantage of model factories is the experimental learning setup, which educates participants in an engaging way, rather than through traditional education approaches. Centers will offer applied training and consultancy services that will test and teach participants on the topic of lean manufacturing, digital transformations, product development, energy efficiency, and other issues.[25]

Set an ambitious decarbonization goal

The European Commission announced the *European Green Deal* in December 2019 with the aim of radically curbing greenhouse gas (GHG) emissions. Member states would be required to reach net-zero emissions by 2050 and a ~55% reduction by 2030. For the EU to reach this target, all countries must do their part and accelerate emission reduction.

Chart 10: Decreasing the greenhouse gas emissions in the Czech Republic

Source: Report Pathways to Decarbonize the Czech Republic by McKinsey



We assume a fair share of EU ETS reduction ambition for 2030, in line with overall targets on the European level.

Although GHG emissions in the Czech Republic have fallen in recent years, the country is still the fourth largest per-capita GHG emitter in the EU after Luxembourg, Estonia, and Ireland. The power sector is the largest contributor, accounting for 35% of GHG emissions, followed by industry, transport, buildings, agriculture, and waste. In contrast, the power and heat sector in Austria accounts only for 10% of their emissions.[26]

25) CAN, Metin. *'Model Factories' to be launched in 10 Turkish cities to ease technological transformation* [online]. 27. 6. 2018 [retrieved on: 2020-09-28]. Available at: https://www.dailysabah.com/technology/2018/06/27/model-factories-to-be-launched-in-10-turkish-cities-to-ease-technological-transformation.

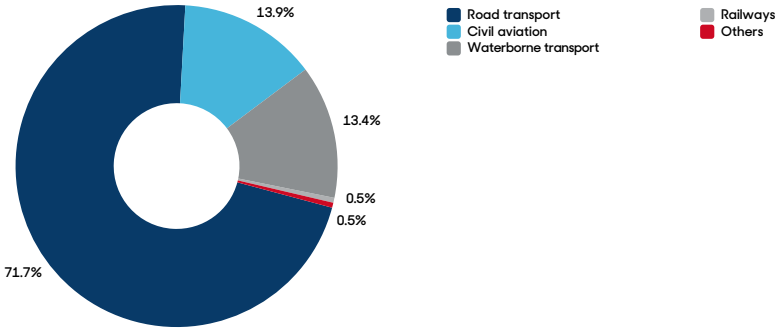
26) McKinsey analysis based on EUROSTAT data.

According to the McKinsey report *Pathways to Decarbonize the Czech Republic*, many of the required investments can be value creating. The most impactful levers to reach the interim target of GHG emissions reduction by 2030 include:

- transition from coal-fired power & heat generation
- scaling down coal mining and coal processing
- electrification of transportation
- efficiency improvement and transition from coal-fired heating in buildings
- electrification of industry.

While each country faces different challenges in power and heat generation and industry segments, a common challenge for all countries is the electrification of transportation. Transport is among the largest GHG emitters that are not subject to the EU *Emission Trading System* levers and so require additional regulation. Within transport, road vehicles contribute 72% of the GHG emissions.[27] Decarbonization requires country-wide reform and an ambitious goal to exceed 30% new electric vehicle sales by 2030 would help. For the Czech Republic and Slovakia, which have the largest automotive sector per capita globally, such a target can accelerate transformation and support industry competitiveness.

Chart 11: Distribution of greenhouse gas emissions by transport type
Source: Eurostat



Some countries, such as France, Germany, Netherlands, Sweden, and Norway, have already joined the *EV 30@30* campaign to reach 30% of electric vehicles sales by 2030.[28] The

27) EU transport in figures: Statistical pocketbook 2019. *European Commission* [online]. 11. 10. 2019 [retrieved on: 2020-10-06]. Available at: https://op.europa.eu/en/publication-detail/-/publication/f0f3e1b7-ee2b-11e9-a32c-01aa75ed71a1.

28) *New CEM campaign aims for goal of 30% new electric vehicle sales by 2030* [online]. 8. 6. 2017 [retrieved on: 2020-09-28]. Available at: https://www.iea.org/news/new-cem-campaign-aims-for-goal-of-30-new-electric-vehicle-sales-by-2030.

Czech Republic, considering the high average age of its car fleet[29] and large automotive industry, could even go beyond this target[30] and achieve 49% of share of BEV + PHEV sales in 2030, resulting in ~590k electric vehicles.

Government will play a critical role in developing and supporting the transition. Typically, governments support the market, for example:

- **Supporting the development of charging infrastructure.** It can mandate the building of charging points at administrative centers or shopping malls or allocate subsidies. Early adopters, such as Germany, Sweden, and the Netherlands have developed infrastructure and expect a mass EV (electric vehicle) adoption. The Czech Republic may need to build up to ~60,000 charge points by 2030, compared to the current 715.[31]
- **Supporting adoption through educational campaigns** to end customers on the benefits of electric vehicles and their environmental impact.
- **Purchasing EVs** for government institutions.
- **Providing non-monetary benefits** to accelerate adoption, such as dedicated parking spaces in the city, separate lanes on the road, or partial exemption of EVs from government congestion reduction policies (i.e., restrictions on vehicles entering the city center).
- **Selectively providing monetary benefits** for customers such as free EV charging, tax benefits, or even subsidies with the aim of accelerating the mobilization of private capital.

Reaching GHG emission neutrality will be a significant milestone, and electrification of transportation is part of the solution.

Improve health by prevention through primary care and telemedicine

The pandemic and its repercussions are estimated to cause a 3%–8% drop in global GDP in 2020. Yet, we estimate that poor health reduced global GDP by 15% in 2017.[32]

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29) Average car fleet age according to ACEA, 2020: Austria 8.2 years, Czech Republic 14.8 years, Hungary 15.7 years, Poland 13.9 years, Slovakia 13.9 year, EU average 10.8 years.

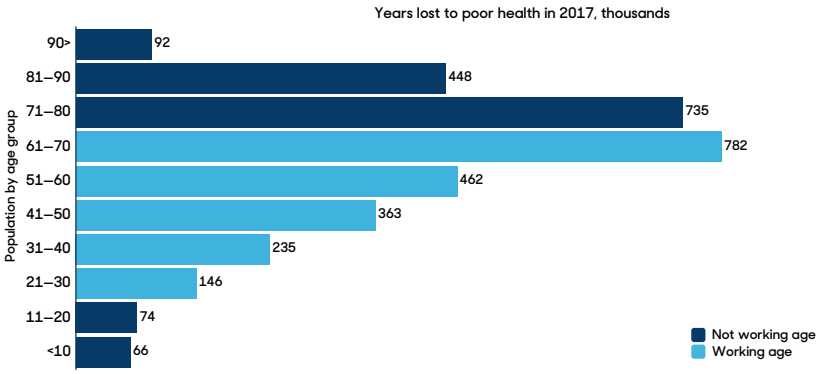
30) *Pathways to Decarbonize the Czech Republic*, McKinsey report (published on 12 November 2020).

31) List of public charging points in the Czech Republic as of records from 31. 10. 2019. *Ministry of Industry and Trade* [online]. November 2019 [retrieved on: 2020-09-28]. Available at: https://www.mpo.cz/assets/cz/energetika/statistika/statistika-cerpacich-stanic-pohonnych-hmot/2019/11/Seznam_ver_DS_2019_10_31fin.pdf.

32) REMES, Jaana, Katherine LINZER, Shubham SINGHAL, et al. Prioritizing health: A prescription for prosperity. *McKinsey* [online]. 8. 7. 2020 [retrieved on: 2020-09-28]. Available at: https://www.mckinsey.com/industries/healthcare-systems-and-services/our-insights/prioritizing-health-a-prescription-for-prosperity.

Chart 12: Years lost to poor health in the Czech Republic

Source: Global Disease Burden Database 2016 IHME, World Bank, McKinsey Global Institute analysis [33]



In the 20th century, life expectancy improved significantly. People live longer, but not necessarily in good health. In the Czech Republic, life expectancy improved by approximately two years between 2007 and 2017 (1.4 years in Austria). Nevertheless, another key indicator, healthy life years, actually worsened for both countries, declining by one year for the Czech Republic and three years in Austria.[34] Generally, 58% of the years lost to poor health occur in the working age, resulting in approximately USD 38 billion in lost economic output.[35]

Healthcare has come to the spotlight in the Covid-19 pandemic. Facing the multifaceted challenge, healthcare systems needed to secure Covid-19-related care, ensure personnel safety, and at the same time take care of other patients. Standard outpatient care has been significantly impacted by patients' inability to see their doctors in person. As a result, the use of telehealth accelerated massively. For example, in the US, adoption surged from 11% in 2019 to 46% in 2020, and 76% of people are interested in using telehealth solutions going forward.[36]

The next digital normal presents an opportunity to simultaneously improve the well-being of our population, boost our GDP, and improve the resilience of the healthcare systems. CE countries can capture immediate benefits by capitalizing on the telehealth trend to improve primary and preventive care – a large contributor to the overall population health.

33) *Life expectancy at birth by sex* [online]. [retrieved on: 2020-09-28]. Available at: https://ec.europa.eu/eurostat/web/products-datasets/product?code=sdg_03_10.
Healthy life years at birth by sex [online]. [retrieved on: 2020-09-28]. Available at: https://ec.europa.eu/eurostat/web/products-datasets/-/tps00150.

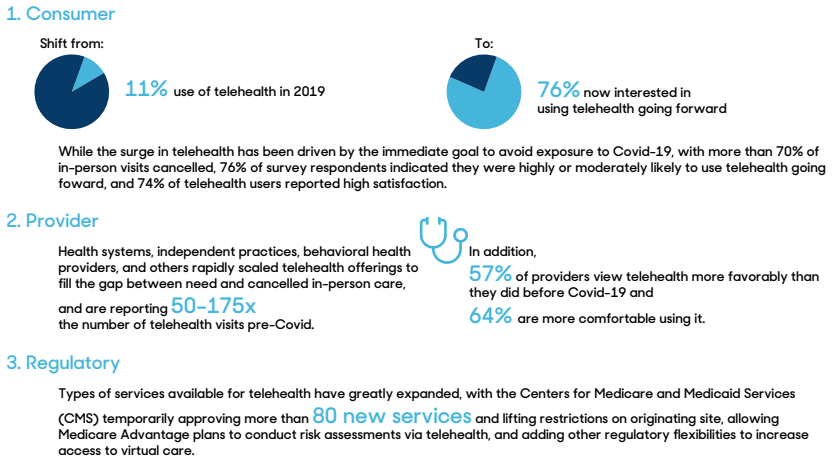
34) The Global Burden of Disease. *Open Learning Campus* [online]. [retrieved on: 2020-10-06]. Available at: https://olc.worldbank.org/content/global-burden-disease.

35) Materials for the report *Prioritizing health: A prescription for prosperity* by McKinsey Global Institute.

36) BESTSENNYY, Oleg, Greg GILBERT, Alex HARRIS and Jennifer ROST. Telehealth: A quarter-trillion-dollar post-COVID-19 reality? *McKinsey* [online]. 29. 5. 2020 [retrieved on: 2020-09-28]. Available at: https://www.mckinsey.com/industries/healthcare-systems-and-services/our-insights/telehealth-a-quarter-trillion-dollar-post-covid-19-reality.

Chart 13: Telemedicine perspective for the Covid-19 pandemic

Source: McKinsey



McKinsey Global Institute (MGI) argues for spending in favor of prevention to accelerate countries towards the goal of improved health. Prevention of diseases is typically less expensive than treatment and reduces the need for more expensive treatment later on, contributing to a high economic return. Fully capturing prevention benefits would bring USD 40 billion of additional economic benefit (a 14% increase) to the Czech GDP, or USD 51 billion (a 9% increase) to Austria's GDP.[37]

CE countries could embark on this journey with several key use cases that are possible to implement in the near future in our region:

- **Enable remote preventive care through telemedicine.** Patients can get information on how urgent the care and a physical visit to the provider actually is and how to proceed (consultation of symptoms, e-prescription, or advice on non-prescriptive drugs, with a physical visit recommended as needed). As a result, access to care in remote areas would improve and the burden on hospitals would be alleviated.
- **Monitor chronically ill and fragile patients through wearable sensors.** For example, wearable sensors can deliver information about heart rates, glucose levels, and oxygen saturation in real time. Chronic diseases, such as diabetes and hypertension, could thus be better controlled. The data could be used to learn about the progression of diseases and effective treatments, speeding up the research of effective treatments. As a result, prevention of complications would improve, raising

37) *Prioritizing health: A prescription for prosperity* [online]. [retrieved on: 2020-09-28]. Available at: https://public.tableau.com/views/PrioritizingHealthAprescriptionforprosperity/PrioritizinghealthAprescriptionforprosperity?showVizHome=no&%3AshowVizHome=no#2.

the quality of life. Admission rates and length of hospital stays would come down, with obvious benefits for healthcare costs and effectiveness.

- **Apply telemedicine and remote-patient monitoring in fighting the pandemic**, with multiple benefits for all involved stakeholders: doctors can treat multiple patients at the same time, patients can feel safe staying home, and reduced hospitalization relieves hospital capacity.
- **Promote remote monitoring across hospitals.** Leverage technology to increase the efficiency and service ratio in the hospital network: use remote monitoring technologies to match demand and supply for specialists, intensivists, and other broader hospital staff to reduce need for patient transfers.

For example, the digitization of British healthcare, has led to significant progress. Digital services like a health portal with an appointment booking system for primary care and a light version of an electronic health record have been implemented nationwide. A key initiative to drive health innovations in the UK is the *NHS Innovation Accelerator*, founded in 2015, which searches for pioneering healthcare innovations that can be implemented nationwide. An example of such an innovator is *Babylon*, one of the UK's best-funded digital healthcare start-ups providing teleconsultations and AI-powered patient triaging. *Babylon* plans to launch "AI to predict disease", using machine learning to assess an individual's health profile and suggest possible future illnesses, and monitoring data usage to identify mental health deterioration.

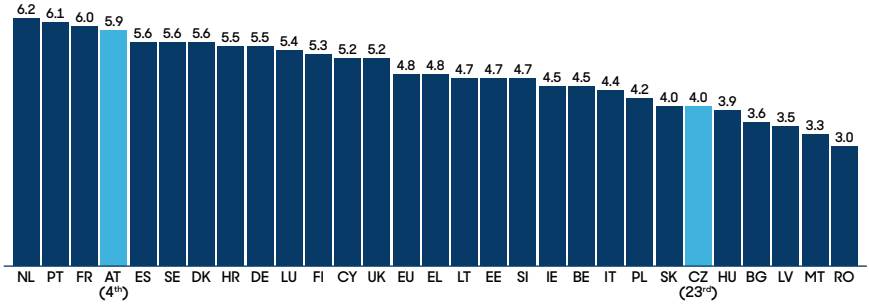
Strengthen key transport infrastructure by accelerating projects

Transport has always been a key enabler of economic growth. It connects supply chains, creating better opportunities for employment, education, healthcare, and multiple other sectors. Two of the most important components of transport infrastructure are the density and quality of the road and railway network. According to WEF's *Global Competitiveness Report*, the biggest differences among CE countries are in the quality and density of roads: for example, while Austria ranked fourth in the EU and the Czech Republic reached only 23rd place.[38]

38) *Czechia – Investments and Infrastructure* [online]. [retrieved on: 2020-09-28]. Available at: https://ec.europa.eu/transport/facts-fundings/scoreboard/countries/czechia/investments-infrastructure_en.

Chart 14: Quality of roads

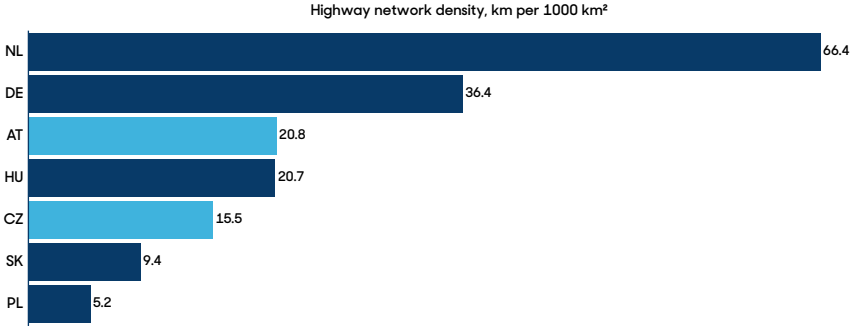
Source: Eurostat



Both the Czech Republic and Austria could also improve in the area of highway network density. The countries are lagging behind the best in the EU, such as the Netherlands, with 66.4 km of highways per 1,000 km². Even a large country such as Germany has achieved a density of 36.4, significantly more than 20.8 in Austria or 15.5 in the Czech Republic.[39]

Chart 15: Density of highways

Source: Eurostat



A key driver of this indicator is the speed of building highways, where projects normally take over ten years. It is essential to accelerate the process of building high-quality highways – end-to-end, from the moment a decision is made to build a new segment of highways, over getting the required permissions, up to the opening celebration.

Success stories start with defining an ambitious goal. The Czech Republic currently has a plan to double its highways infrastructure by constructing 800 km of highways by

39) *Transport in the European Union: Current Trends and Issues* [online]. March 2019 [retrieved on: 2020-09-28]. Available at: https://ec.europa.eu/transport/sites/transport/files/2019-transport-in-the-eu-current-trends-and-issues.pdf.

2050. What would it take to achieve this goal in half of the time, constructing on average 55 km per year vs. the planned 27 km? This goal could be realistic if several levers are applied simultaneously:

- **Pass a special law:** Italy, for example, was able to rebuild the Genoa bridge only in 15 months after beginning the construction and two years after the demolition of the previously failed bridge. A project of such size could take around 14 years due to cost-focused tenders that often make projects uneconomical to construction firms and lengthy appeals processes. In the Genoa case, there were no appeals, and the project was built "at the right costs and the right way".[40] Special laws could accelerate not only the land expropriation process for strategic infrastructure projects (such as the *Ley de Expropiación Forzosa* in Spain), but also improve the selection process.
- **Improve contracting:** Economic theory teaches us that repeated tenders among few participants can easily result in oligopolistic behavior that escalates costs and reduces quality. To ensure the full benefits of competition, significantly larger sections of the highways could be tendered. For example, tendering a 100-km section instead of 10 km would force competitors to go "all in" and also attract companies not currently in the market. In addition, economies of scale can allow current and potential competitors to develop their supply chains for subcontractors and building material. The approach needs to go hand-in-hand with high-quality contracts with a clear set of KPIs, correctly assigned rights and liabilities, and speedy conflict-resolution mechanisms.
- **Empower a central building authority:** For example, gas pipeline construction is controlled by a central building authority, and the development process takes only two years. Central decision-making can also be subject to better transparency and increased competition by attracting larger, multinational engineering and construction players with the necessary skills, resources, and experience. An alternative would be to **review the tasks delegated to municipalities,** which are currently heavily involved in the development of highways. The Czech Republic stands out by having a very high number of municipalities: According to the OECD study on municipal fragmentation and economic performance,[41] in 2012, the Czech Republic had the highest degree of fragmentation out of the 25 countries analyzed in the study, with 6,253 municipalities on the local level. In contrast, Denmark implemented a Structural Reform

40) MONELLA, Lillo Montalto. How did Italy manage to build a replacement Genoa bridge so quickly? *Euronews* [online]. 3. 8. 2020 [retrieved on: 2020-09-28]. Available at: https://www.euronews.com/2020/08/03/how-did-italy-manage-to-build-a-replacement-genoa-bridge-so-quickly.

41) Municipal Fragmentation and Economic Performance of OECD TL2 Regions. *OECD Regional Development Working Papers* [online]. [retrieved on: 2020-09-28]. Available at: https://www.oecd-ilibrary.org/urban-rural-and-regional-development/municipal-fragmentation-and-economic-performance-of-oecd-tl2-regions_5jrxqs60st5h-en;jsessionid=fNOJA4yl_SLlw6HT-UCWGQSt.ip-10-240-5-33.

in 2007, reducing the number of municipalities from 271 to 98, and also rearranged the distribution of tasks, with roads newly included under the agenda of municipalities.[42] While we are not calling for merging local municipalities, their tasks should be reviewed in light of "minimal economic scale" and appropriate incentives created to shift tasks with economies of scale and skill to higher levels.

- **Examine the possibility of PPP (Public Private Partnership) projects:** A private investor would, in all probability, achieve a higher speed of highway development due to a net present value focus. A total cost of ownership view means the private owner would also better optimize between investments in the road and future maintenance costs. As there are numerous types of concession contracts, PPP does not necessarily imply that the road will be tolled.
- **Follow *design to value* (DtV) principles** in the design phase of planning the highway network: Such an approach includes constant evaluation and comparison between what drives customer value and cost drivers. The process starts with conducting a customer value analysis – which, in the context of transport infrastructure, means man-years of travel time saved or road accidents prevented. Consequently, cost positions are analyzed and cost reduction ideas are generated. DtV is a powerful principle, which aligns the ratio of benefits to costs of different projects and project components and ultimately allows more to be built for less.

As Albert Einstein said, in the midst of every crisis lies a great opportunity. Due to the Covid-19 pandemic, the gap between the winners and losers – both in the private and public sectors – is widening at unprecedented speeds. Due to their relative similarity, CE countries should boost their collaboration efforts to solve the most critical questions ahead: questions related to digitization, education, re-skilling, environmental protection, healthcare, and infrastructure. The set of topics is unifying and answers will be country-specific; however, countries should serve as a potential source of inspiration for each other. CE countries can hopefully emerge stronger in the post-Covid next normal.

42) Structural Reform. *Ministry of Social Affairs and the Interior* [online]. [retrieved on: 2020-09-28]. Available at: https://english.sim.dk/responsibilities-of-the-ministry/economics-of-municipalities-and-regions/structural-reform/.