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## NEO GRIDs Performance in 2020

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The Center for Economic Development identified 33 driver industries in the 2019 report titled “**Northeast Ohio Front Runners: Groups of Regional Industry Drivers (GRIDs).**”<sup>1</sup> GRIDs are wealth-creating industries that pay high wages, have a robust regional specialization, and contribute to the economy through regional supply chains. However, in this year alone, the U.S. and Ohio economies have seen a trade war with China, retaliatory tariffs on U.S. goods, the collapse of oil prices, and mandatory business closings due to the COVID-19 pandemic.<sup>2</sup> These events contributed to the already ongoing cyclical repression, and impacted the wealth creation of Northeast Ohio’s (NEO)<sup>3</sup> GRIDs. This research brief represents an update on the consequences of COVID-19 on GRIDs, specifically the **Professional Services**, **Growing Legacy Manufacturing**, and **Oil and Gas GRIDs**, to investigate what factors allowed for some industries to grow while others experienced a considerable downturn.

## Overview

While the employment and output of the **Professional Services**, **Growing Legacy Manufacturing**, and **Oil and Gas GRIDs**— were negatively affected by the COVID-19 pandemic to varying degrees (Table 1), the impact on

these GRID industries was lower than all other NEO industries due to multiple factors:

- The **Professional Services GRID** played an essential role in NEO’s economy during COVID-19 closures; in particular, *General Medical and Surgical Hospitals* since they directly addressed the public health emergency
- The **Growing Legacy Manufacturing GRID** adapted to produce Personal Protective Equipment (PPE), demonstrating the resiliency of their business models
- Some industries in the **Professional Services GRID** successfully operated remotely during stay-at-home orders because they restructured their operational models

Meanwhile, non-GRIDs, population-serving industries, and non-restructured manufacturing companies experienced a greater negative impact due to:

- An inability to conduct business activities remotely when federal guidance and state requirements mandated closing non-essential business and operations<sup>4</sup>
- COVID-19 exacerbating already weak performance
- Changing consumer behaviors, particularly when it came to purchasing cars and large appliances

**Table 1. GRIDs Economy Performance in 2020**

2019 OUTPUT					2019 EMPLOYMENT				
Change since 2018		2020 Projected Loss			Change since 2018		2020 Projected Loss		
▲	0.3%	\$60.2 billion	-\$2.0 bil	-3% ▼	▲	1.1%	250,291 jobs	-16,107 jobs	-6% ▼
<b>Professional Services GRID</b>					<b>Professional Services GRID</b>				
▲	0.5%	\$21.0 billion	-\$3.4 bil	-16% ▼	▼	-1.2%	110,238 jobs	-19,663 jobs	-18% ▼
<b>Growing Legacy Manufacturing GRID</b>					<b>Growing Legacy Manufacturing GRID</b>				
▲	0.8%	\$5.9 billion	-\$1.4 bil	-23% ▼	▲	3%	3,331 jobs	-876 jobs	-26% ▼
<b>Oil and Gas GRID</b>					<b>Oil and Gas GRID</b>				
▲	0.4%	\$87.0 billion	-\$6.7 bil	-8% ▼	▲	0.4%	363,860 jobs	-36,646 jobs	-10% ▼
<b>TOTAL GRIDs</b>					<b>TOTAL GRIDs</b>				
▲	3.4%	\$160.2 billion	-\$18.4 bil	-12% ▼	▲	0.6%	1,710,469 jobs	-280,709 jobs	-16% ▼
<b>Non-GRIDs Industries</b>					<b>Non-GRIDs Industries</b>				
▲	2.3%	\$247.3 billion	-\$25.1 bil	-10% ▼	▲	0.6%	2,074,329 jobs	-317,354 jobs	-15% ▼
<b>TOTAL NEO</b>					<b>TOTAL NEO</b>				

Sources: Moody’s Analytics for pre-COVID Employment and Output; McKinsey Vulnerable Jobs tool for Ohio for Projected Employment Lost; IMPLAN Direct Effects of Value-Added from the NEO Model for Projected Output Loss; Center for Economic Development

<sup>1</sup> Lendel, I., Piazza, M., and Demko, I. (2019, February). Northeast Ohio Front Runners: Groups of Regional Industry Drivers (GRIDs) Research Brief. *Urban Publications*.

<sup>2</sup> Zandi, M., Rogers, J., and Cosma, M. (2019, September). Trade War Chicken: The Tariffs and the Damage Done. *Moody’s Analytics*; Demko, I., Lendel, I., and Piazza, M. (2020, May). From Economic Slowdown to Recession. *Urban Publications*.

<sup>3</sup> Northeast Ohio consists of an 18-county region of Ashland, Ashtabula, Columbiana, Cuyahoga, Erie, Geauga, Huron, Lake, Lorain, Mahoning, Medina, Portage, Richland, Stark, Summit, Trumbull, Tuscarawas, and Wayne counties.

<sup>4</sup> DeWine, M., Husted, J., and Acton, A. (2020, March 22). Director’s Stay at Home Order. *Ohio Department of Health*.

## Professional Services GRID



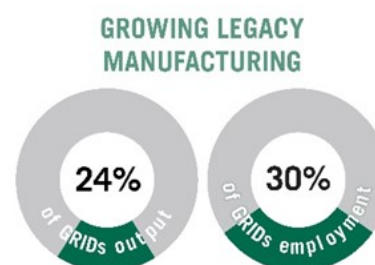
The **Professional Services GRID** is the most impactful NEO GRID, as it represents 69% of GRID employment and 70% of the total output. In 2019, output and employment of all ten industries in the **Professional**

**Services GRID** increased, especially in *General Medical and Surgical Hospitals* and *Insurance Carriers, Agencies, Brokerages, and Other Insurance-Related Activities*. *General Medical and Surgical Hospitals* experienced the most significant rise in output (+5%) and employment (+2%) in this GRID. Insurance companies also showed substantial output growth (+5%), but employment remained almost unchanged.

Moreover, during the 2020 pandemic, the **Professional Services GRID** has had the lowest level of job and output loss among all other industries (including Non-GRIDs), which is attributable to these industries' ability to work remotely and retain their workforce during Stay-At-Home orders (Table 2). The COVID-19 pandemic will continue to cause a high demand in the *General Medical and Surgical Hospitals* industry. In fact, since March 2020, the healthcare sector has accounted for the highest share of new job postings in Northeast Ohio with openings for registered nurses, respiratory therapists, clinical pharmacy residents, and patient care assistants to provide medical care for COVID-19 patients.<sup>5</sup> Additionally, **Cleveland Clinic** has partnered with **United Airlines** and **Clorox** to enhance air travel safety and to provide advice on cleaning and disinfection protocols.<sup>6</sup> Finally, \$11.6 million of the **Coronavirus Aid, Relief, and Economic Security (CARES) Act** funding received by NEO hospitals established telehealth programs, likely increasing efficiency and accelerating labor productivity.

Another **Professional Services GRID** experiencing growth is the *Wholesale Electronic Markets and Agents and Brokers* sector. Employment in these industries is growing as **Amazon** continues to hire warehouse workers to assist with the increase in online deliveries. The company is expanding its presence in Northeast Ohio by building three new delivery stations in Cleveland, Bedford Heights, and Glenwillow. As a result of this investment, new full-time and part-time jobs will be created that include a \$15 per hour minimum wage and competitive benefits packages.<sup>7</sup>

## Growing Legacy Manufacturing GRID



In 2019, many industries in **The Growing Legacy Manufacturing GRID** experienced a decline in output and employment. While this GRID represents a much smaller proportion of output and employment, it was also more profoundly

affected by the COVID-19 pandemic, losing 18% of its workforce (almost 20,000 jobs) and 16% in output (\$3.4 billion). This drop is particularly unfortunate given that Growing Legacy Manufacturing was experiencing growth prior to the pandemic.

The Raw Steel Industry (*Iron and Steel Mills, Ferroalloy Manufacturing, and Steel Product Manufacturing from Purchased Steel*) has been affected the most because of decreased demand for automobiles and large appliances. Consequently, many of the steel industry's customers closed their operations due to Stay-At-Home orders. Despite re-openings, business conditions continue to be depressed, with no significant improvement in demand for steel products. Companies responded to this downturn in various ways. **TimkenSteel** implemented unpaid rolling furloughs for 80% of salaried employees.<sup>8</sup> Meanwhile, **U.S. Steel** permanently closed its Lorain Tubular Opera-

**Table 2. GRIDs Resiliency to Social Distancing Measures**

NEO GRIDs Name	Vulnerable Jobs During Stay-at-Home Order	Estimated Percentage of Lost Jobs After Re-Opening
<b>Professional Services GRID</b>	24%	5%
<b>Growing Legacy Manufacturing GRID</b>	47%	19%
<b>Oil and Gas GRID</b>	48%	32%

Note: Weighted by each industry's employment in corresponding GRID

Sources: Moody's Analytics for "Employment"; McKinsey's "Vulnerable Jobs Tool for Ohio"; Center for Economic Development

<sup>5</sup> Based on data from the Greater Cleveland Partnership, *OhioMeansJobs* (<https://jobseeker.ohiomeansjobs.monster.com/>), and "Ohio Department Job and Family Services, Development Service Agency" (<https://jobsearch.ohio.gov/>) job search websites.

<sup>6</sup> Glaser, S. (2020, May 20). United Airlines partners with Cleveland Clinic, Clorox, to boost air travel safety, cleanliness. *Cleveland.com*

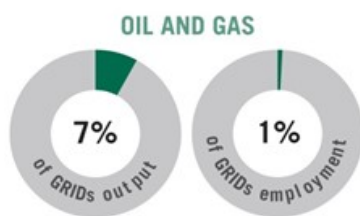
<sup>7</sup> Justice, C. (2020, July 27). Amazon to open 3 new delivery stations in Cleveland, Glenwillow, Bedford Heights. *News5Cleveland*.

<sup>8</sup> TimkenSteel Announces First-Quarter 2020 Results. *Press Release*. May 7, 2020.

tions facility due to weak domestic demand for its products.<sup>9</sup> **ASWPeng**, a steel wire manufacturer headquartered in Bedford Heights, also reported the closing of its entire facility due to financial distress.<sup>10</sup> As the pandemic and its economic impact progressed, **ArcelorMittal Warren LLC** placed its employees in Cuyahoga, Trumbull, and Summit counties on indefinite layoffs.<sup>11</sup>

However, some manufacturing companies outside of the iron and steel industries have experienced an increase in demand. **GOJO Industries**, Purell's Akron-headquarters (*Soap, Cleaning Compound, and Toilet Preparation Manufacturing*) is expanding its manufacturing facilities in the region because the demand for hand sanitizer, soap, wipes, and surface spray is growing exponentially as the economy reopens.<sup>12</sup>

## Oil and Gas GRID



In 2019, employment in the **Oil and Gas GRID** increased by 3%, mostly in the *Oil and Gas Extraction* industry. On April 20<sup>th</sup> 2020, the oil price turned negative for the first time in

U.S. history when traders paid buyers to remove them of the obligation to deliver oil. Negative oil prices occur when the price of oil is below production costs. In April, oil prices dropped due to a surplus of oil production and lack of storage capacity, combined with inadvertent benefits of an oil price war between Saudi Arabia and Russia. In 2020, oil prices will continue to be low, resulting in employment and production losses, especially in extraction industries. As a result, production costs for downstream oil, gas, and petrochemicals will decrease, and consumers will benefit from lower oil and gas prices.

In oil and gas extraction, 48% of all jobs are vulnerable to social distancing measures.<sup>15</sup> Of the three GRIDs in NEO, the **Oil and Gas GRID** will see the greatest negative impact on employment and output due to the COVID-19 pandemic with a 26% decline in employment (nearly 900 jobs) and a 24% drop in output (\$1.4 billion).

Ultimately, the pandemic and subsequent economic disruption forced companies to rethink and retool their business models and global supply chains, at times, for the better. For example, **reshoring** — bringing manufacturing jobs that had been off-shored back to the U.S. — presents considerable opportunities for NEO, which experienced significant job loss in the **Growing Legacy Manufacturing GRID**. A 2020 survey of U.S. manufacturers found that 64% of companies are likely to bring production and sourcing back to North America due to supply chain disruptions brought on by the COVID-19 pandemic.<sup>13</sup> Currently, only 23% of local demand from manufacturers in NEO is met by local production.<sup>14</sup> However, **JobsOhio**, the state's private nonprofit economic development corporation, has taken on reshoring as one of its economic development strategies to strengthen the state and regional economy.

## Final Thoughts

Based on our analysis, the NEO region may lose 10% of its total output (\$25 billion) and 15% of all employment (317,000 jobs) in 2020. Direct financial assistance to the NEO region from the CARES Act, the Federal Reserve's Main Street Lending Program, and JobsOhio's loan programs aim to protect labor income, preserve jobs in industries adversely impacted by the spread of COVID-19, and put the economy in a better position to recover. Given that NEO's GRIDs have accounted for 363,860 jobs and \$87 billion in total output, continued growth in the **Professional Services GRID** may help offset some of the losses in other industries. Ultimately, industries able to adapt to remote business activities are prone to a faster recovery from the first and consequent waves of COVID-19, and reshoring could result in a substantial increase in manufacturing employment for the first time in decades.

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Please share your comments with  
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<sup>9</sup> WARN Notice from March 23, 2020.

<sup>10</sup> WARN Notice from May 11, 2020.

<sup>11</sup> Worker Adjustment and Retraining Notification (WARN) from April 14, 2020 April 21, 2020; April 29, 2020; and May 5, 2020. <https://jfs.ohio.gov/warn/current.stm>

<sup>12</sup> GOJO Continues to Add Production Capacity to Support the Frontlines and the Reopening of Businesses and Public Places. *Press Release*. May 5, 2020.

<sup>13</sup> Leonard, M. (2020, May 14). 64% of manufacturers say reshoring is likely following pandemic: survey. *SupplyChainDive*.

<sup>14</sup> Based on the *Average RPC* from the Social Accounting Matrix in the 2018 IMPLAN NEO Model.

<sup>15</sup> McKinsey tool for Ohio. (2020, May). Vulnerable US jobs across industries and occupations amid COVID-19 (<https://covid-tracker.mckinsey.com/vulnerable-jobs/state>); REMI. (2020, May 14). The economic & fiscal impacts of the oil & gas glut - Peter Evangelakis, Ph.D. & Chris Judson, REMI. [Recording]