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Greetings

The 35 or so mayors at the 5th Yale Mayors College represented all parts of America. There were mayors from Massachusetts and California, from Minnesota and Texas, and from all parts in between, including West Virginia, Indiana, Oklahoma, Tennessee, Ohio, Kentucky, and more. Several mayors have served for multiple terms while others are early in their first term.

Regardless of geography or length of experience, with rare exceptions mayors introduce themselves as apolitical problems solvers who are focused on helping the people in their communities. Mayors have extremely difficult jobs with immense challenges and limited resources. A former federal official stated, “Mayors are the best hope for the future of the country.”
Community & Economic Development

Overview
The economic and social problems facing the United States and facing each community are immense. These challenges include unequal opportunity, a crumbling infrastructure, racism, and struggling education and health care systems.

In America, solutions often arise in communities, and often come from bipartisan collaboration between the public and private sectors, including government leaders, business leaders, philanthropists, and nonprofits. There are seeds of community and economic development success throughout the country, from Connecticut to California. Among the ongoing challenges is sustaining and scaling these successes.

Context
Investor and philanthropist Ray Dalio provided an overview of the factors that affect economies and responded to questions about community and economic development. Mayors described development challenges they are facing and discussed solutions and success stories.

Key Takeaways
On a national level, America faces profound economic and social challenges.

Drawing from his recent book Principles, Ray Dalio described the four forces that affect economies. These are productivity, the short- and long-term debt cycles, and politics.

Based on those factors, the U.S. economy today has low interest rates, high asset prices, a huge wealth gap, and a rise of populism. There is also a rising world power (China) challenging U.S. dominance, ushering in a period of conflict. In many ways the current situation resembles the 1930s. If the United States were to suffer an economic downturn, there could be a great deal of conflict.

Dalio is a capitalist but believes capitalism needs to be reformed. Historically, most people in the U.S. have believed in the basic idea of equal opportunity. But many people don’t believe in that idea today. In particular, Dalio sees a national need to invest in education and in infrastructure.

These national problems play out daily in cities across America.

In discussing problems, participants shared statistics to illustrate challenges they are facing. A few examples are:

- 22% of high school students in Connecticut are disengaged or disconnected, putting them at high risk to drop out.
- An incarcerated individual in Connecticut costs $80,000 to $100,000.
- An analysis of recipients of Supplement Nutrition Assistance Program (SNAP) benefits found that 68% have to take off work to go get their benefits.
- Local property taxes in Madison, Wisconsin, previously accounted for one third of the city’s revenues; those taxes now make up 75% of city revenue. Other cities face similar situations.

However, statistics don’t tell the full story. Mayors see the following in their communities:

- A “sense of hopelessness,” especially in some urban communities.
- A “hollowing out” in many communities, particularly rural areas. Even when there are jobs, rural areas can’t keep qualified people to fill those jobs.
- Flaws in the housing systems, food systems, health care systems, and educational systems.
- Lack of funding. Mayors described wanting to pay teachers more or make critical investments, but not having the money to do so. But other mayors disagreed, stating that there is adequate funding but “the problem is us.”
- Lack of sustainable revenue sources and funding models. Some mayors see the problem not as a lack of funding at the current mo-
ment, but as lack of a tax base and lack of ongoing revenue to fund operations and make desired investments.

- Fear that technology will replace people.

An academic observed that the problems cities face are unending. Cities have limited resources, don’t control the players, and often have stakeholders with differing goals and measures.

Mayors are pursuing structural solutions, with numerous successes, but long-term change is hard.

The challenges facing mayors and cities are daunting. Yet mayors are optimists who are committed to finding practical solutions to improve the lives of the people in their cities. Mayors and participants discussed both structural and systemic solutions as well as specific success stories.

- Aspirational culture. Despite whatever challenges a community faces—and there are many—it is the role of the mayor to have an aspirational vision and to bring everyone together. Mayors must remind communities that everyone is interdependent, interconnected, and in it together. By focusing on culture, mayors can lead to a renewal of spirit.

- Tapping philanthropy. Philanthropy can play a critical role for funding initiatives when no other funding sources exist. Mayors from Connecticut expressed gratitude for significant educational funding from the Dalios. Mayors also recognized important and generous contributions from philanthropic funders such as Marc Benioff (in Oakland) and the Morgridge Family Foundation.

Yet, while philanthropy plays an incredibly important role in filling holes and proving new concepts, multiple mayors agreed it is not an adequate, sustainable long-term funding source.

- Forming public-private partnerships (PPPs). Several mayors stressed the importance of forming partnerships among the public sector, the private sector, and nonprofits. PPPs can link a community’s education system, its workforce, and its business community.

“The only way to change the world is through public-private partnerships. We can’t use charity to solve structural problems.”

- Changing the tax structure. Mayors appreciate philanthropy but don’t want to rely on it as a savior. Several mayors prefer to generate sustainable, long-term funding through taxes, yet often face strong community opposition to raising taxes.

In making structural and systemic changes, all mayors agree that there needs to be bipartisan support and cooperation.

“On our best days we are nonpartisan.”

Specific initiatives and success stories mentioned include:

- Oakland Promise. This program is a cradle-to-career initiative that provides funding and support for children in Oakland to go to college. The intent is to change the culture in the community and to create a pipeline to college.
• **Student data.** The New Haven, Connecticut, schools have worked with the Dalio Foundation to use data about students to track student progress, identify gaps, and intervene when necessary. By using data it is possible to spot problems early and take action.

• **Infusion of the arts.** The National Endowment for the Arts provides grants so that the arts are embedded into cities and schools. The focus is to go beyond STEM to STEAM, where the addition of the A is for arts.

A professor observed that a strength of democracy is that because it is decentralized, it spawns experiments and laboratories. However, a weakness of decentralization is the difficulty of scaling success; there is neither the ability nor the will to scale.
Crisis Management:
Lessons from the Front Lines

Overview
It is inevitable that mayors will have to deal with crises. These can include natural disasters, crises such as opioids or immigration, or political or personal crises. How a mayor deals with a crisis can be a defining moment for the mayor and the community.

While by their nature crises are unexpected and uncertain, mayors can still prepare their team and identify best practices by working with other mayors and communities. During a crisis a mayor’s key role is one of leadership in setting priorities, making decisions, and communicating with the public.

Context
Mayors discussed the wide range of crises they are dealing with, how they are responding, and lessons learned in managing a wide array of crises.

Key Takeaways
Few mayors are prepared for the crises they will experience.

How elected officials respond to crises are often defining moments. Yet most mayors don’t feel prepared when a crisis arises. In a real-time poll, 85% of mayors said they wished they were better prepared to manage crises before assuming office.

Even a mayor who had a great deal of experience dealing with crises before entering office said, “You still can’t be ready for everything.”

The range of crises with which mayors must contend is astounding.

Among the crises discussed were the opioid crisis, the immigration crisis, natural disasters such as fires and floods, political crises, and even personal crises.

Opioid crisis
The opioid crisis is affecting communities across the country. Per one mayor, “It is eroding the foundation of the country.” Nowhere is this more of an issue than in West Virginia. Huntington Mayor Steve Williams invoked the Stockdale Paradox in citing the need to acknowledge the brutal facts and figure out how to prevail. In dealing with the opioid crisis, Williams said it is necessary to name this crisis, own it, and then start to control it.

Immigration crisis
Multiple mayors from different parts of the country see immigration as a crisis for different reasons. In El Paso, Texas, which is considered to be ground zero for immigration, more than 100,000 immigrants have come across the border since January. These individuals are coming for economic opportunity. The federal government is showing no backbone by failing to deal with immigration for decades, or with DACA, turning immigration into a political football.
Other mayors see immigration as a human crisis, a political issue, and an employment issue in their communities, which need immigrants as part of the workforce. Some mayors far from the border have chosen to speak out on immigration (possibly in favor of or in opposition to sanctuary cities) because they see it as a topic their constituents care about. As one mayor said in discussing immigration, "Mayors have the trust of their constituents. They need to use it for the public good."

Even with extensive preparation, there will be unexpected, unpredictable, day-by-day challenges. But the more you can prepare the better.

**Natural disasters**

During and after natural disasters—such as Hurricane Katrina or the fires in California—the federal, state, and local governments need to work together. Often this doesn’t go well, with regulations, bureaucracy, blame, and at times lawsuits.

A reality is that in disasters, roles and responsibilities are often not well defined. A recommendation for mayors is to be proactive in anticipating natural disasters before they occur and working with other parties to clarify roles. During a disaster the mayor and other local officials must educate the public and federal officials, which is often extremely difficult.

**Police-related crisis**

Several communities have experienced crises when a police officer kills a citizen. While it is essential to investigate whether the police office followed protocols and procedures and to be fully transparent, it is also necessary for mayors to be present and to listen, as people in the community will want to vent.

**Political and personal crises**

Mayors are not immune from becoming part of political crises. As an example, in Virginia, there was political infighting when the governor was accused of racial insensitivity and the lieutenant governor was accused of sexual assault. The mayor of Richmond, who had previously supported the governor, joined other political leaders in calling for the governor to resign.

But the governor ultimately decided to stay and asked to be forgiven. At that point, Richmond’s mayor called on the governor to step up and take actions to make amends. Despite Richmond being Virginia’s state capitol, the mayor and the governor have not spoken in months.
Mayors can also experience their own personal crises. One example is a mayor who broke the law, was convicted, and spent time in jail. But he made amends, felt he still had something to offer his community, and was reelected. Others commended him as a good, bipartisan mayor who has made a great deal of progress. The lesson: personal crises can be overcome.

Mayors’ experiences dealing with crises offer multiple lessons.

In reflecting on the many crises that mayors must deal with, lessons learned include:

- **Prepare in advance.** Most mayors felt ill prepared for managing a crisis when entering office, yet experience shows that having to deal with a crisis is almost inevitable. Therefore, prepare and plan to avoid being surprised.

- **Identify best practices.** There is no need to reinvent the wheel. Learn from others who have experienced similar crises what has worked and what hasn’t. Then, adapt what has worked to the specifics of your community.

- **Set priorities.** A key part of a mayor’s role in a crisis is to decide what is most important, to set priorities, and to communicate these priorities. One example was the decision in Buffalo to deprioritize arresting people for possessing small amounts of marijuana. This action, in anticipation of decriminalization at the state level, has been seen as a positive in the community, led to fewer arrests, and allowed prioritizing resources in more important ways.

- **Partner locally.** The most effective responses to crises are not from one individual but from a well-coordinated team. Identify key team members in advance, develop processes, and build relationships.

- **Form consortia.** Mayors find it valuable when connecting with other mayors across the country who are grappling with (or have grappled with) similar issues. While each community and situation is unique, much can be learned through conversations with others facing similar challenges.

- **Be the communicator.** In a crisis, mayors must wear several hats in leading the local response. Among a mayor’s most important roles is to communicate with the public during a crisis, as the mayor is the face of the town. People want their mayor to provide facts and show a clear grasp of the situation. It is important for mayors to be clear, authentic, confident, and optimistic.
Infrastructure Part 1: 
Mapping New Communication and Energy Pathways

Overview
Based on strong demand among consumers and businesses for greater connectivity, communication infrastructure companies are moving rapidly to expand their footprints, enhance their services, and deploy 5G. This process can be expedited through a more rapid permitting process. Benefits for cities include increased employment, greater connectivity—which comes with a host of benefits—and the potential for smarter cities with more connected devices.

Regarding new energy pathways, there was less discussion of transformative new technologies and more discussion of the need for a new kind of energy grid. There was also a general discussion from an experienced business leader who is now working in state government. He advised companies not to approach government simply looking for money but to focus on the public good, form coalitions that can act collectively, and think creatively about the wide range of things that government can do other than provide money. If businesses were to follow this advice, the likelihood for forming successful public-private partnerships would increase.

Context
Representatives from American Tower Corporation and Verizon described how new generations of communication technologies will create new possibilities for consumers, businesses, and municipalities. Richard Kauffman, chair of the Energy Research & Development Authority for New York, described the need for a new grid and shared his perspective on how private sector companies can engage more effectively with government.

Key Takeaways
American Tower is working to create a new era of connectivity.

American Tower (AMT) is a shared infrastructure company that has about 180,000 towers in 19 countries across North America, Asia, Latin America, Europe, and the Middle East. The company has 40,000 towers in the United States; 28,000 are higher than 150 feet tall. These towers are in major urban areas, suburbs, and rural areas.

AMT’s core unit is a “macro tower” which often resides on building rooftops or can be part of the local décor, such as a lamp post. AMT provides the capital for the tower; carriers like Verizon and AT&T are AMT’s tenants. If AMT can have more than one tenant per tower the company can generate attractive returns.

Boston provides an example of how AMT serves a city. AMT has seven macro towers throughout Boston, serving areas such as the financial district, retail areas, and residential areas. AMT has 40% of the Boston market.

Today AMT’s towers provide 4G services, but as the demand for data and connectivity grows, AMT will evolve to 5G. AMT will continue to add towers, add tenants to existing towers, and add additional services, such as data centers at its towers.

Trends the company sees in connecting more people and machines include:
- A demand for faster data
- A demand for massive numbers of connected devices as part of the Internet of Things (IoT)
- A requirement for ultra-reliability and low latency

These demands will make it possible to operate smart cities, drones, and self-driving cars.

AMT decides which cities to invest in based on the demand and opportunities. When working in a metropolitan area, AMT is typically making requests to build towers and dealing with permitting issues. The speed of permitting can affect the speed of implementation.

Verizon is investing to bring about 5G networks.

Lauren Love-Wright reviewed the five generations of wireless. They are:
- 1G = Analog voice
- 2G = Digital
- 3G = Data applications
- 4G = Faster data
- 5G = Ultra-high bandwidth for greater speed and massive connectivity of the Internet of Things (IoT)
Verizon is moving quickly to implement 5G, which will consist of a combination of macro towers that provide broad coverage and “small cell” that provides connectivity through a fiber network for a specific area. 5G will make new things possible that can’t even be imagined at the moment.

Creating this new 5G network requires significant investment and deploying massive amounts of fiber, which can put a stress on cities. Therefore, to deploy fiber as quickly as possible, it is important for Verizon to work closely with cities to coordinate the process and streamline permitting.

For cities where Verizon is deploying 5G there are significant benefits. These benefits include construction jobs in the local area, significant local investments, and an infrastructure that enables use of smart technologies and development of smart cities. Memphis is one of first cities in the U.S. where Verizon will be deploying 5G.

A tech-savvy academic encouraged the communications infrastructure companies not to try to fix the 20th-century infrastructure, but to have imagination in creating the infrastructure for the 21st century. He called on these companies to be more aspirational and to build entire ecosystems; not to simply “pave over the cow paths.”

The U.S. needs a new energy grid and new types of relationships between businesses and government.

Having served as New York’s “Energy Czar,” Richard Kauffman believes the country needs a new kind of energy grid. The current grid is tremendously inefficient, has systemic problems, and operates at low-capacity utilization.

Reimagining the energy grid requires a new type of relationship between the private sector and government. While Kauffman has recently worked in the federal and state government, he previously had a long career in the private sector, including being a partner at Goldman Sachs. But he was critical of how businesses approach government and offered advice for more fruitful interactions. He shared the following thoughts:

- When companies talk with government the conversations are often win/lose.
- Companies want things that cost the government money and often have a very narrow perspective.
- The conversations need to change to define a public-private partnership as a relationship that achieves a public benefit and where a company can make money.
- It would be far more beneficial if companies framed their argument as based on what’s right for the system; not what’s right for the company.
- Company CEOs should be the individual speaking with government officials about PPPs; not lobbyists. CEOs have a broader perspective.
- Companies need to think more creatively and more broadly about the range of things that government can do, without necessarily providing money.
- Companies would be more effective if before approaching government they were able to bring multiple stakeholders together. That way it wouldn’t just be one company lobbying based on self-interest; it would be a coalition taking collective action to benefit the public and a group of companies. This has far more appeal to government officials.
- Companies should come to the table with evidence about what has worked in other places.

Kauffman believes that if more companies would come to the table as he described, the relationship between the private and public sector could work far better.
Infrastructure Part 2:  
Mapping New Transportation Pathways

Overview
On a national basis, the transportation infrastructure needs significant investment, but this requires federal leadership and financial support, which are lacking. There are examples of focused public-private partnerships to improve the transportation infrastructure and to improve an area’s human capital.

The airlines and airports are a more positive story. After years of struggling, the airline industry is finally profitable and is investing billions of dollars in airports across the country. But there are winners and losers. The major hubs, with frequent air service and major employment, are the winners, as are smaller towns that are getting new service. But industry consolidation is creating political and economic development problems for some non-hub markets, particularly mid-sized cities.

Context
Along with several mayors, the CEOs of UPS and American Airlines discussed the transportation infrastructure.

Key Takeaways

The transportation infrastructure is being neglected by the federal government.

Everyone is well aware that the U.S. transportation infrastructure is aging. Companies that rely on the transportation infrastructure say that the deteriorating conditions have a significant negative effect on the economy. UPS CEO David Abney termed this a federal issue that requires a federal solution. But the federal government continues to neglect to address the transportation infrastructure. At the federal level there is a great deal of understanding of the issues, but there is lack of agreement on how to pay for the improvements that are required.

Many businesses that use the transportation infrastructure are willing to pay for upgrades through higher taxes and user fees, as long as these funds are dedicated specifically to improving the transportation infrastructure. Yet even with the support of businesses, federal officials are unable to make any progress on legislation.

In the absence of federal action, cities can work with companies on local infrastructure improvements.

Mayors expressed frustration with the federal government, arguing that the government is the key source of infrastructure capital and needs to provide funding.

Yet, even in the absence of federal funding there are success stories of businesses working with communities to improve the infrastructure. As was discussed in several sessions, the appropriate vehicle is some form of a public-private partnership.

In Louisville, UPS and the city have worked together on a mutually beneficial relationship. UPS has made major investments in creating its domestic air and logistics hub in Louisville. In total, UPS has invested $2.5 billion in Louisville over 20 years, which has led to 20,000 jobs there. In fact, UPS has added so many employees that the company experienced difficulty in finding enough qualified people. A result has been that UPS has gone beyond just investing in physical capital and is also making significant investments in human capital.

UPS worked in partnership with the University of Louisville and Jefferson Community and Technical College to form Metropolitan Collection. While working at UPS, employees get their college education paid for by the company. This is a win/win in that UPS is developing employees with the logistics expertise the company needs, while students are gaining valuable skills, are able to graduate from college without debt, and are better prepared to advance in their career. This relationship has been beneficial for the company and the city.

Airports are a key part of infrastructure with far greater local control.

Airports tend to be owned by municipalities, providing more local decision making, impact, and control. As a result, the airlines often develop relationships and work with mayors.
After many years of struggling financially, which included struggling with often inefficient and costly hub and spoke systems, the airline industry is now profitable and is finally returning its cost of capital. As the airlines have achieved firmer financial footing, they have invested hundreds of billions of dollars in airports across the country. Especially in major hubs, airlines are large and important employers and the presence of a hub can have a major impact on the economy.

Some smaller towns, such as Stillwater, Oklahoma, are excited to finally have commercial air service. This runs counter to the narrative of just a few years ago that predicted the demise of regional airports. The profitability of the airlines and the increased efficiencies of the hub and spoke system are making service possible for more smaller communities.

However, not everyone is celebrating the airlines. The mayor of a medium-sized city said that industry consolidation is creating political and economic development problems for non-hub cities, particularly mid-sized cities. Another mayor complained that while there are investments in selected airports, there need to be increased funds for air traffic control. But once again, these funds would need to come from the federal government, which is failing to address infrastructure needs.
Rise of the Rest: Showcasing Innovation Around the Nation

Overview
High-growth startups are vital in creating new jobs and industries. But most startup activity has been concentrated in a few urban centers. This needs to change because America needs innovation and startups to be broadly dispersed, not just in Silicon Valley.

The key is creating entrepreneurial ecosystems with capital, talent, and collaboration. These ecosystems need to include entrepreneurs, technologists, investors, mentors and advisors, academic institutions, government, nonprofits, and more. Mayors have a key role to play in making startups a priority, helping bring people together to orchestrate these ecosystems, and creating a model for the city that attracts and retains people based on the cost of living, quality of life, opportunities, and values. Cities such as Pittsburgh demonstrate this is possible.

Context
Legendary entrepreneur Steve Case, who co-founded America Online, made the case for why startups are so important for America’s future and why it is essential to have startups throughout the country. He suggested actions mayors can take to spur creation of startups everywhere.

Key Takeaways
Startups are vital to job growth. To date they have been concentrated in Silicon Valley.

Business is not one monolithic sector; it is actually three sectors, with different characteristics:

- **Big business**: These are major corporations that account for a large number of jobs. But large companies on the whole are not creating new jobs.
- **Small businesses**: This group of businesses also accounts for lots of jobs, but is not creating new jobs.
- **High-growth startups**: This is the sub-sector of business that is driving the greatest creation of new jobs.

However, high-growth startups are not being created equally in all locations across all groups. Venture capital is a key factor contributing to the success of high-growth startups. Yet currently 75% of VC in the United States goes to three states: California, New York, and Massachusetts. Of that, the majority is concentrated in just four metro areas: San Francisco, San Jose, New York City, and Boston.

These cities – and Silicon Valley in particular – have well-developed startup ecosystems that attract talent and capital. These ecosystems are perpetuating in that they drive an ongoing cycle of startup activity. Silicon Valley has actually created a brain drain in other areas, as young entrepreneurial-minded people flock there to be part of this ecosystem.

Further, there is a huge disparity in who receives venture capital. Today, 90% of venture capital goes to companies founded by men and only 10% goes to companies founded by women. And companies established by African Americans receive only 1% of venture capital.

**America needs startups everywhere. Mayors must make startups a priority.**

Serial entrepreneur Steve Case, who is an advocate for creating high-growth startups nationwide, said, “We have to level the playing field and opportunities. We have to create stronger startup communities.”

“We need startups everywhere. We need capital and talent everywhere.”

Case believes that following the advent of the Internet, startup activity in the U.S. has occurred in waves.

- **First wave**: Startup activity related to the Internet is geographically dispersed. An example was his high-growth startup America Online (AOL), which was based in northern Virginia.
- **Second wave**: Startup activity is concentrated in a few cities, especially Silicon Valley.
- **Third wave**: Case believes that Silicon Valley peaked a few years ago, that innovation will disperse, and that the next wave of high-growth startups will take place throughout the country. He anticipates a diffusion of innovation instead of the concentration of innovation. Others don’t necessarily agree. An MIT technologist said, “Silicon Valley is still where the action is,” and cited blockchain as an example of another technology where Silicon Valley is leading the way.

Case argued that people have been drawn to Silicon Valley by entrepreneurial opportunities, but about 90% of the people in Silicon Valley are transplants and many don’t necessarily want to live there. A
mayor commented that few people can afford to live in Silicon Valley and there are lots of good reasons to live elsewhere.

Participants said cities must develop new models and propositions that allow them to retain their best and brightest. This new model must include local and regional entrepreneurial ecosystems, access to capital and talent, a good quality of life, a lower cost of living, and a community with desirable values. Such a model can keep entrepreneurs in communities across the country and prevent them from migrating to Silicon Valley.

“Innovation will disperse.”

Working with other successful entrepreneurs, Case has launched a campaign titled “Rise of the Rest.” He meets with entrepreneurs across the country and hosts pitch competitions where the winners can receive significant funding for their startup. Case said mayors must focus on startups and being catalysts. Among the specific actions he suggested for mayors are:

• Recognize the important role of startups and make startups a priority.
• Put a spotlight on entrepreneurs and celebrate them.
• Take the lead in creating opportunity zones.
• Convene people in the community and orchestrate collaboration.
• Encourage the community to identify and leverage what is unique. This can result in entrepreneurial clusters and ecosystems focused on specific industries. For example, Pittsburgh has become a center for self-driving car technology; Cleveland has several medical technology companies in some way related to the Cleveland Clinic; Florida is emerging as a hotbed for space tech; and St. Louis has a great deal of ag tech activity.

Creating successful startups takes the right people, ideas, and resources. Mayors can play a role by creating the conditions and ecosystems that make these high-growth startups possible.

One participant noted that as respected local leaders, mayors bring an authentic voice on creating a hospitable environment for entrepreneurs and startups must be a top priority for mayors.

Pittsburgh is an example of a city that has renewed and transformed itself.

For decades Pittsburgh struggled. It was viewed as a blue-collar steel city that experienced high unemployment, declining population, and a poor bond rating. But over time Pittsburgh has become a modern midwestern success story. Today Pittsburgh has its lowest unemployment since the 1970s, its highest bond rating, and the population is growing.

A few of the factors contributing to Pittsburgh’s renaissance are that strong philanthropic foundations in the city continued to provide support, and strong universities such as Carnegie Mellon continued to engage in innovative research. Nonprofits and universities are important elements to a thriving ecosystem.

In reinventing itself, one area of focus for Pittsburgh has been autonomous vehicles. Pittsburgh has partnered with auto companies and companies such as Uber which have invested billions of dollars. In a short period of time this has led to the development of an ecosystem far away from Silicon Valley that is “looking at autonomous everything.”

Pittsburgh is a story of persistence, collaboration, partnership, leadership, strong universities, an educated workforce, government support, business engagement, and continued momentum. Pittsburgh’s transformation didn’t happen overnight, but it shows what is possible across America.