

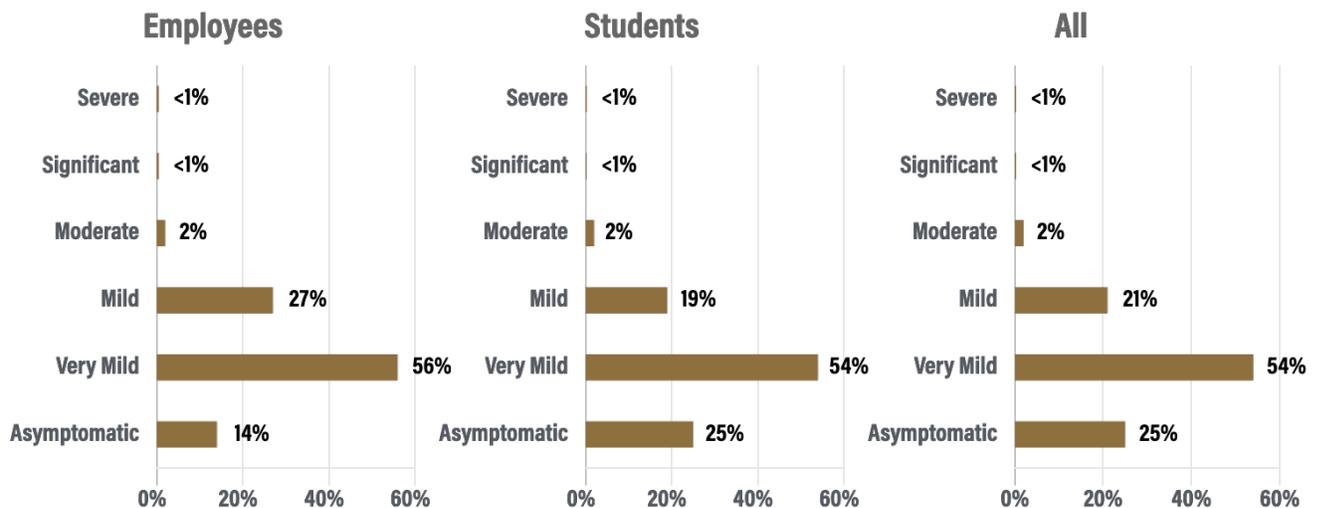
Annual Open Letter to the People of Purdue from Mitch Daniels

January 5, 2022

It's difficult for me to grasp, but this is the tenth missive in this little series. The first, which I offered on my first day on the job in 2013, had two purposes: first, to spare the campus the annual speech that some presidents deliver each year; and second, to spare us all the work and tedium of a formal investiture ceremony. I harbor the hope that the previous nine have added a little value beyond those goals, by sharing with the Purdue family some sense of events in the university, as well as the broader context of the higher education sector in which we work and compete.

Maybe the best feature of this year's edition is that I won't have to say too much about viruses, testing and tracing, quarantine space, or vaccination rates. The superb team of faculty and staff that kept Purdue open last academic year, more nearly normal than any school our size, has maintained its vigilance through the summer and fall semesters.

Severity of All Cases



Mercifully, the task has been easier and the results quite good: With vaccination rates, achieved through personal choice rather than a "mandate," infections have been a fraction of last year's. Most important, we have seen virtually no severe cases, with almost none rising above Level 4 on the 6-level Severity Index we devised in 2020.

The rapid emergence of the Omicron strain, seemingly much milder in its effects but more transmissible even to vaccinated individuals, will require careful monitoring these next few weeks. At this point in time, our Medical Advisory Team believes our current plans – strongly encouraging vaccination and surveillance testing of those not vaccinated – provide a sound basis for launching our semester. As we have from the start, we will continue to follow the science, modifying our plans as needed to keep our campus safe and open.

Lots more info is available at our Protect Purdue website, but I'm happy to say that's all I intend to say on that topic.

Leaving 2020 Behind

Meanwhile, "happy" is, I believe an apt word to describe the atmosphere on the West Lafayette campus these last few months. A couple of years back, a national journalist making his first visit to Purdue described it to his readers as "**a happy place (<https://www.wsj.com/articles/college-bloat-meets-the-blade-11544829900>)**." I liked that at the time, reflecting on how many schools at which that adjective would not apply.

But if the description was accurate then, I think it might have been even more so this fall. I checked my own impression with others many times until it became clear we all sensed the same thing: a palpable enthusiasm to be back together. It showed in attendance at events, including huge student sections at Ross-Ade and campus functions like Dance Marathon. But you could simply tell it from the faces, especially of those freshmen who spent what should have been a great senior high school year locked down at home.

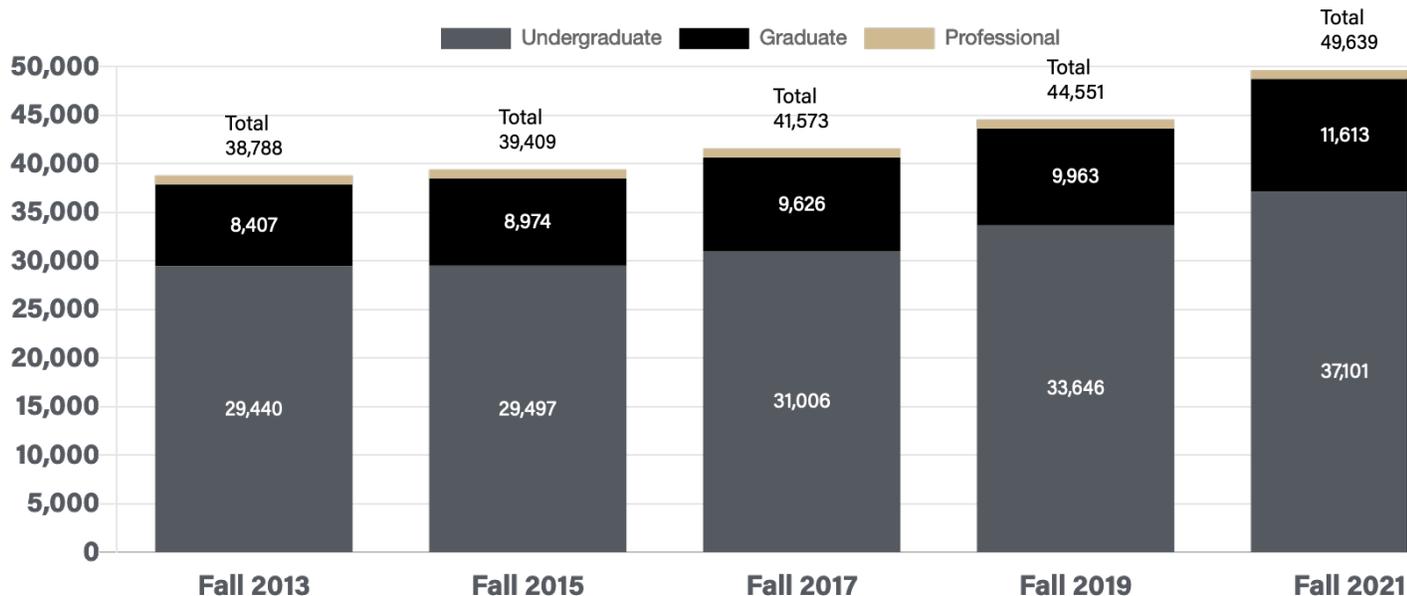
Another cause for a positive outlook, albeit also some temporary scrambling, was that those new Boilermakers arrived in such enormous numbers. Our previously very accurate enrollment models were on the money again as to Indiana and international students, but for the first time in my experience, we missed big in forecasting how many admittees from the other forty-nine states would take us up on our offer.

On inspection, it's clear that the way we navigated the pandemic was a major reason for the unexpected surge. Responses to our new-student questionnaire listed our management of COVID as a leading factor in their choice, behind academic reputation and affordability. Notably, our tours and our wonderful student guides clearly played a role, among the many candidates saying that their other schools of interest would not permit them to visit campus, or were closed altogether.

Whatever the causes, the result was a record-shattering first-year class of 10,191, the largest in the

entire Big Ten. We've become accustomed to record-size classes, but never a surprise like this one. Coupled with another record for graduate enrollment, this produced a total student population just below 50,000. We have come a long way from the time of that first letter, and this growth is a big part of the answer to the question we all get everywhere these last few years: "How in the (world) can you people keep tuition and fees flat for an entire decade?"

Total Enrollments at West Lafayette



A "Brand That Matters"

Our commitment to affordability has become a big part of our national reputation, but it's hardly all we're known for. We all know to view college ratings as the imperfect, sometimes subjective exercises that they are. But watching our own ratings steadily rise, and as the top 10 rankings grow, we're entitled to give them some credence. As, belatedly, the nation is beginning to demand some evidence of value for the tuition dollar schools are demanding (more on this below), we pay special attention to the high marks Purdue tends to earn on that criterion.

A Top 10 University

Ranking	Source	National Ranking
Most Innovative	U.S. News & World Report	#8
Top Public University	The Wall Street Journal/Times Higher Education	#10
Best Value University	The Wall Street Journal/Times Higher Education	#7

Ranking	Source	National Ranking
Best University for Engagement	The Wall Street Journal/Times Higher Education	#4
Graduating the Most STEM Majors	Forbes	#5
Best College for Veterans	College Consensus	#7
Best Online Learning School	Newsweek	#3

Another encouraging grade came late last year, when our online offerings were rated #3 in the country. Here the evaluators were assessing graduate programs, both those awarding full degrees and the growing category of sub-degree certificates. Given the struggles these letters admitted we were going through earlier in the last decade, our recent fast growth in the breadth and quality of our online education represents a significant step forward.

Perhaps the single best indicator of our strengthening reputation came in October, when the widely read Fast Company magazine named Purdue one of its "Brands That Matter," alongside companies like Ford, Nike, McDonald's, and 3M. But even more stunning, we were the only university on the entire list.

The magazine said its honorees were entities that "give people compelling reasons to care about them." We know that they examined recent innovations like the Purdue Polytechnic High Schools, Degree in 3, Protect Purdue and our affordability policy in arriving at our selection. It gives us a lot to live up to, and serves as a reminder that you're only as good as your next game.

Back to Reality

Enough good news. Another reality to bear constantly in mind is that moments of greatest success are often the moments of greatest peril. Ask veterans of Eastman Kodak, or GE, or any number of once-dominant sports franchises. The myriad trends menacing higher education, chronicled in almost all these letters over recent years, have grown in intensity and imminence. However well it seems things are going at present, we must resist the temptation to imagine that we can drift into the future on cruise control, or that the setbacks and even crises now confronting so many of our counterparts could not happen here.

2020 may be seen in hindsight as the year the market finally, finally began to speak to higher ed. For the first time in memory, tuition increased at a rate below rather than above inflation. Rising inflation made the comparison easier, but still, at less than 2%, the jump in tuition in each of the last two years was the smallest since 1979.

We have all learned that stated tuition “sticker prices” can be deceptive. Many schools, especially expensive private institutions, have been practicing backdoor discounting for a long time, wooing undecided students with lavish “scholarships” while charging any they could full price. Last year, for the first time, such discounts nationally reached **fully half** (<https://www.insidehighered.com/news/2021/05/20/private-colleges-cut-539-tuition-sticker-price-freshmen-average>) the stated tuition amounts, and our enrollment experts **report** (<https://www.forbes.com/sites/lucielapovsky/2021/05/28/the-private-college-tuition-model-is-broken-tuition-up-enrollment-and-net-revenue-down/?sh=517a4dae7422>) that some private colleges have now gone as high as 60% in a desperate attempt to fill their dorms and dining halls.

Their travails are only going to get worse. Yet again this year, the number in college dropped, this time by 3.5%. (The national decline started about the time I came to Purdue, but no one has found a causal relationship so far.) Hopes that many missing students from the 2020 high school graduating class were merely taking a “gap year” were dashed when it turned out that **only 2% enrolled** (<https://www.highereddiver.com/news/hoped-for-gap-year-enrollment-boom-turns-out-to-be-a-bust/610968/>) a year later.

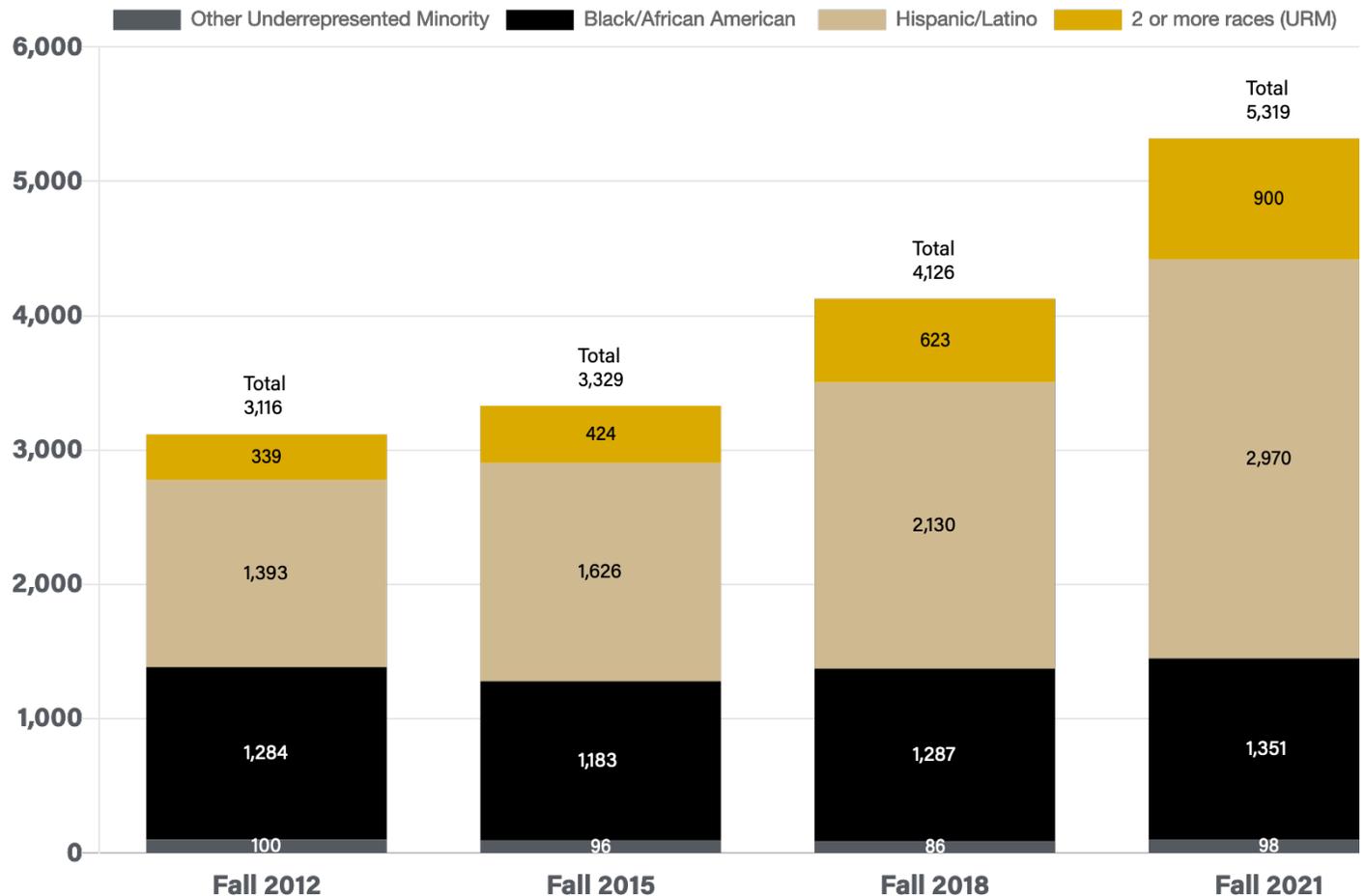
The percentage of Americans saying higher education is worth its cost plummeted to **60%** (<https://www.insidehighered.com/news/2021/09/13/survey-shows-americans-are-divided-over-value-degree>), a post-war low. With the U.S. “birth dearth” reducing the total number of young people in the country and the percentage of college-age Americans choosing to enter higher ed, at least directly, also dropping, continuing shrinkage in the number of schools and the size of the survivors seems inevitable. At least 70 colleges disappeared or merged **since 2016** (<https://www.highereddiver.com/news/how-many-colleges-and-universities-have-closed-since-2016/539379/>); looking ahead, I’d bet the over.

For now, it appears that Purdue and other large public universities are faring better than other types of schools; the big current losses are concentrated in the private, public regional, community college, and for-profit categories. But we are presented with an immediate challenge that we share with all of higher ed: a sharp **decline** (<https://www.wiche.edu/wp-content/uploads/2020/12/Knocking-pdf-for-website.pdf>) in the number of high school graduates, including African Americans, at a disproportionate rate. Just as we have embarked on a \$75 million effort to bring more such students to Purdue, in fierce competition with virtually every other school, the macro circumstances have moved against us all and made a hard job harder.

The above-mentioned initiative, spawned by the Equity Task Force commissioned by the Trustees in 2020, is making headway despite the headwinds. Another of the five new strategic moves will also have a direct bearing on our ability to maintain present momentum. The **“transformative education**

(<https://www.purdue.edu/provost/about/provostInitiatives/excellence/index.php>)” project, led by our Provost Jay Akridge, aims to evolve and enhance the residential Purdue experience such that young people and their parents will continue to see it as providing value no at-home alternative can match.

West Lafayette Enrollment of Underrepresented Students



Tomorrow’s Purdue education almost certainly will feature even more hands-on, “experiential” learning, more undergraduate research opportunities, and maybe fewer than four years living on campus, the rest involving internships, international study, online courses, and so forth. We believe that residential education and in-person instruction will retain clear advantages over quicker, cheaper, purely digital modes, but only if we can discover and implement changes that make those advantages attractive and persuasive.

Where Are All the Men?

If 2020 was the year when a search for value asserted itself, 2021 was the year when the nation finally

discovered an issue long in plain view. Sparked by a major article in **The Wall Street Journal** (<https://www.wsj.com/articles/college-university-fall-higher-education-men-women-enrollment-admissions-back-to-school-11630948233>), a host of journals began examining the 3:2 disparity in women to men on college campuses. The New York Times reported, "The latest enrollment numbers for Spring 2021 show a record gap between the sexes."

There is nothing new about the phenomenon; it dates back at least three decades. What was new was the dawning realization that, in a knowledge economy where educational credentials and the skills that (theoretically) they confer are more and more essential, leaving half the population behind would be a problem for society. Again, The New York Times reported, "The simple mathematics of more women than men earning college degrees means that many highly educated women will either have to partner with less-educated men, or forgo partnership," resulting in a lower birthrate. How ironic if, after a half-century of historic, overdue progress integrating women fully into the nation's economic, social and political life, we gave back the immense societal gains of that climb because men stopped holding up their end.

Assuming one agrees that this is a problem, Purdue is playing a part in addressing it. Our historic average of about 57% men in the undergraduate population has held remarkably steady, even as many other schools saw that share drop to the low 40's or even lower. There is no intention behind this against the trend position, and no mystery about the reasons. Young men and women select into various disciplines at very different rates, and the STEM subjects which are relatively predominant at Purdue tend to attract men.

We have, and will extend, a host of programs to recruit more women into these disciplines. As one example, our 26% female share of engineering students is one of the nation's highest. (I have sometimes observed that no one ever writes to express concern that we need more men in our 87% female veterinary medicine college, or our 89% female nursing department, or our 64% female college of pharmacy.) Purdue cannot solve this looming national problem, but sending out thousands of exceptional young engineers, computer scientists, and other technology experts who happen to be men is a contribution few other institutions are making.

A Magnet for Talent

Previous letters have chronicled our ambition to build a highly attractive environment on and around the campus, as a means of recruiting ever more talented faculty and students to Purdue. I have sometimes quipped that our cost-benefit analyses ruled out building mountains or digging an ocean, so we opted for an "innovation district" instead.

Those who haven't recently been on campus, particularly on its western borders, routinely express astonishment at the changes there. The residential development called the Provenance is growing rapidly, and demand for its variety of housing units is strong. It will soon be joined by other housing, designed for alumni, senior citizens, and young professionals. Retail, health care, and entertainment facilities will follow close behind.

The entire area will be among the nation's first genuine "smart city" communities. Working with a set of technology partners (AT&T, Celona, Dell, Cisco, Ericsson, SBA Communications and Tilson), homes and businesses in the district will have access to 6G-level connectivity, and serve as a test bed for new high-tech products and services as they emerge.

All this growth is propelled less by Purdue's own expansion than by the economic development investments we have captured so **far** (https://youtu.be/AupMlugU_-k?t=20), and we are vigorously pursuing additional such opportunities. The State Street transformation project, which represented our first step toward this futuristic community, is 15 years ahead of schedule in attracting the private investment necessary to enable Purdue and PRF to recoup our financial contributions to the project, but we intend to stay well ahead of projections and eventually exceed them. At that point, we will continue to derive many benefits from the vibrant Discovery Park District ecosystem spawned by this investment, while delivering a new and sustainable tax base to the City of West Lafayette.

Serving Our Nation

From its inception, Purdue has lived up steadfastly to its land-grant public responsibilities, and much of that proud record has come in the cause of our **national security** (<https://earchives.lib.purdue.edu/digital/collection/debris/id/27532/rec/2>). Our large and longstanding Reserve Officer Training Corps, for instance, has been joined in recent years by **programs** (<https://www.purdue.edu/research/features/stories/on-the-front-lines-national-security-defense-needs-being-addressed-through-military-university-partnership/>) to provide graduate degrees to active-duty officers, and by Purdue Global's extensive online degree **offerings** (<https://www.purdueglobal.edu/military/>) to military personnel and their families.

Our current research portfolio includes a number of nationally recognized centers of critical defense-related work. With the coming installation of the nation's first MACH 8 quiet wind tunnel, led by Steven Schneider, Purdue will add to its renown at the leading edge of propulsion and aerodynamics expertise. Our energetics teams, under brilliant talents like Steve Beaudoin, Jeff Rhoads, and Steve Son, are having difficulty handling all the demand for their services from both the Department of Defense and its private contractors.

But perhaps our largest contributions lie just ahead, and they lie in the most urgent realm threatening our security as a people. In the field known as hypersonics, vehicles which can exceed five times the speed of sound while remaining maneuverable, adversary nations have reported enormous progress, to levels at least equal if not beyond current U.S. capabilities either to protect against or deter. It is the area of single greatest concern to those responsible for our national defense.

As we have reported over the last couple years, Purdue, led by our head of research Theresa Mayer and professor of aeronautics Dan DeLaurentis, aspires to create a complex of hypersonics research and testing facilities of a type the nation desperately needs. Companies trying to develop systems to rival those touted by the Chinese and Russian militaries currently wait two years or more for a chance to test their innovations.

With the lead investments of Rolls-Royce in the aerospace sector of our Discovery Park District, as well as the Hypersonics and Applied Research Facility and the upcoming Hypersonic Ground Test Center, we believe we are on our way to establishing this crucial national asset. Success would mean huge new opportunities for faculty and student research, and employment. But more important, it would represent an enormous public service of importance to literally every American.

With such success will come new challenges. We are already a target for foreign influence and espionage, both industrial and military. Becoming the nation's center of hypersonics research will intensify such activity, and our need to take further steps to prevent it. For the second time, Purdue received the "Excellence in Counterintelligence Award" from the Defense Counterintelligence and Security Agency for the skill of our faculty and staff at protecting essential information. Maintaining that excellence will take even greater vigilance and, probably, greater investment.

We will make any such investments gladly, with deep pride in people like Dan DeLaurentis, Dongyan Xu, and Carol Handwerker, and all of Purdue's contributions to keeping us all safe and free.

Purdue's Tomorrow

To repeat, times of greatest success are the times of greatest danger. Complacency, self-satisfaction, and pride in the status quo can comprise a lethal recipe, and higher ed has been dining on that dish for a long time.

Laurels rested on dry up and wither quickly. If the Purdue of ten or twenty years from now still enjoys its current vitality, momentum, and reputation, it will be because, in traditional Boilermaker fashion, it has continued the commitment to innovation and change, the commitment that brought about the

revamped Polytechnic Institute, “Degree in Three,” Purdue Global, the three PPHS inner-city high schools, the Cornerstone great books program, or the new civics education requirement, to name just a few illustrations.

Amid other progress in the last year, an achievement that stands out is the coming together of Purdue for Life, our new alumni engagement vehicle. Brought about through the statesmanlike leadership of Dan Dawes, Steve Murphy, and the Alumni Association Board, working with our Board of Trustees, Purdue for Life promises a dramatically broader future of lifelong service to Purdue graduates.

Under its skillful and farsighted director, Vice President for University Advancement and Alumni Engagement Matt Folk, “P4L” is changing the compact with Boilermakers from four (or less!) great years and some occasional alumni events, to an undergraduate experience that is just the first step in a continuous, lifelong relationship. Already, online courses ranging from wine appreciation to American Sign Language are available, along with professional networking resources, volunteer service opportunities, mentorship opportunities, and more.

Each time I am around Purdue alumni, I am struck by the same inspiring reaction. Their stories of great accomplishments, great careers, great lives led almost never began with privileged origins. Overwhelmingly, Boilermakers have come from the small towns, the inner cities, the farms, places where any head start they got more likely stemmed from the values they absorbed than from any great material advantage.

It must always be so. My successors in this job must experience the same joy I derive from meeting such alums. That’s what tuition freezes, Purdue inner-city high schools, and rigorous, cutting-edge pedagogy are all about. I think we can fairly conclude that 2021 took us a little closer to that ideal, and to a future as strong and productive as Purdue’s present. Now for an encore.

Boiler up.



Mitchell E. Daniels, Jr.

President



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