

JUNE 2020

BUILDING A FUTURE

**KANSAS BOARD OF REGENTS
STRATEGIC PLAN FOR
KANSAS**





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Images courtesy of the University of Kansas, Wichita State University Campus of Applied Sciences and Technology, Cowley Community College and Washburn University



Helping Kansas Families

Supporting Kansas Businesses

Advancing Economic Prosperity



For the past decade, public higher education in Kansas has been guided by the Kansas Board of Regents' strategic plan, *Foresight 2020*. Under this plan, the system achieved several important successes. The number of credentials awarded grew. Retention rates improved across multiple sectors, and along with them, graduation rates. Entry level wages for graduates steadily increased.

Perhaps most importantly, *Foresight* helped the system look to the future and ask critical questions about higher education's role in Kansas. How do universities and colleges help Kansans enter rewarding careers and improve the quality of their lives? How do they help businesses find the talent needed to grow and compete? How do they support and advance the Kansas economy?

As leaders from across the system began developing a successor for *Foresight*, these questions drove their work. Recognizing the unmatched ability of higher education to grow the Kansas economy, the Regents decided that a new strategic plan must be built upon serving Kansas families and businesses and creating economic prosperity in the state.

Job and wage data make it clear that education beyond high school offers Kansans the best opportunity to secure a prosperous future. According to Georgetown University's Center on Education and the Workforce, the number of jobs nationwide for workers with no education past high school has declined by 1.8 million since 1991. Meanwhile, the nation has added 21.7 million jobs for those with some education beyond high school.¹

Higher education offers Kansans the best opportunity to secure a prosperous future.

In 2019, median earnings of workers with an associate degree or some college education outpaced the earnings of those with no education past high school by more than \$5,700. The increased earnings were even more significant for those with bachelor's degrees and higher, whose median earnings in 2019 were more than \$32,000 greater than workers with only a high school diploma.²

¹ Georgetown University Center on Education and the Workforce, *Three Educational Pathways to Good Jobs: High School, Middle Skills, and Bachelor's Degree*, 2018

² U.S. Bureau of Labor Statistics, Median usual weekly earnings of full-time wage and salary workers by educational attainment, 2020

Businesses also derive great benefit from higher education. Research performed shows an increasing number of jobs will require education beyond high school as employers seek to hire more employees with postsecondary training and credentials.³ These employees possess the skills and credentials that help keep their businesses competitive.

***Building a Future* aims to maximize the benefit of higher education for Kansas families, businesses and the economy.**

In addition to workforce training, the Kansas public higher education system supports businesses and entrepreneurs through innovation, research and partnerships that leverage the unique capabilities of the system to grow the state's economy.

Between the benefits it provides to individuals and the support it gives to businesses, higher education is a powerful engine of economic growth. It is the most effective tool Kansas can use to advance the state.

Building a Future is the Board's new strategic plan to ensure that the system is maximizing the benefits it is providing to Kansas families, businesses and the economy. To do this, development of the plan began with a series of focus groups to gather feedback and input from students and parents, as well as business leaders.

During the spring and summer of 2018, Regents traveled to communities across Kansas to gather input from families and businesses on the current state of higher education and how they hoped the system might help them in the future. Regents and

staff held meetings in Colby, Dodge City, Garden City, Hays, Kansas City, Pittsburg, Topeka and Wichita to get a snapshot of the different challenges and opportunities faced by the different regions in the state.

The feedback received from high school students indicated that the overwhelming majority (99 percent) saw education beyond high school as important for their personal success. However, many students perceived hurdles standing between them and successful completion of a postsecondary degree or certificate program. Cost of attendance was chief among these concerns, with most students indicating it was the biggest barrier they faced. Many students felt intimidated by the prospect of student loan debt and their ability to repay it.

Other concerns mentioned by students included issues of access. Several pointed to the application process, financial aid requirements and a lack of knowledge about their options as barriers for entry. Those who had support from high school counselors or a parent who had attended college expressed fewer concerns about access issues, but students without that support found the process daunting.

Students mention issues of affordability and access as their primary concerns in attending a college or university.

Like high school students, business leaders strongly believed that higher education is incredibly important for the success of their organizations. Every business leader surveyed agreed that workers with credentials beyond high school

³ Georgetown University Center on Education and the Workforce, *Recovery: Job Growth and Education Requirements through 2020*, 2013

were necessary for their company’s continued success. More than 85 percent of those surveyed said that they frequently seek to hire employees with postsecondary credentials, and 90 percent stated that employees who have postsecondary credentials meet or exceed their expectations.

Nearly three quarters of Kansas employers indicate it is difficult to find enough employees with postsecondary credentials.

However, while business leaders expressed their happiness with the skills possessed by credentialed workers, they were very concerned about their ability to recruit, retain and grow the talent they need. A full 73 percent stated that it is hard to find employees with suitable education.

At its retreat in August of 2018, the Board took the feedback received from students and businesses and used it to develop areas of focus under each pillar. For families, the focus would be placed on **affordability, access and success**. For businesses, it would be on the **talent pipeline and industry sponsored research**. The Regents also decided to add a third pillar to capture the intentional economic development efforts of institutions that fall outside of the scope of the family and business pillars.

During the next year, representatives from across the system worked to develop a series of metrics that would evaluate how well the system performs in each area of focus. After the 2019 Board retreat, these working groups undertook development of promising practices that could be implemented at the system or sector level to help achieve progress in each metric. These promising practices make *Building a Future* like no other plan in the nation by promoting purposeful systemwide strategies tied to the metrics the plan measures.

Building a Future Structure

Pillar	Area of Focus	Dashboard Metric	Progress Metric	Promising Practices
Overarching themes of <i>Building a Future</i>	Developed based on focus group feedback, these help establish the primary goals for the system within each pillar	The main indicators of success in each area of focus, these are big picture measurements that will often lag by several years	The secondary indicators of success, these metrics show results more quickly than dashboard metrics and are a good indicator of progress though they present a less complete picture than dashboard metrics	These are system- or sector-wide initiatives that can be implemented to drive progress on the metrics



Family

Building a Future centers its first pillar on families. It aims to ensure that higher education remains affordable and accessible to Kansans, while continuing to help graduates achieve success.

After gathering information from the focus groups of students and parents about priorities, the Board office coordinated with several working groups of representatives from across the state’s public higher education system to develop the family pillar and make recommendations to the System Council of Presidents and the Board Governance Committee.

These groups discussed metrics that could serve as high level indicators of the progress the system was making in each area of focus, ultimately selecting a total of six “dashboard” metrics for the family pillar.

- **On Time Graduation and Student Loan Default Rate** as indicators of affordability
- **Enrollment Equity Gaps and College Going Rate** as indicators of access
- **Graduates in Jobs with Sustaining Wages** and the number of **Degrees and Certificates Earned** as indicators of success.

Since many of these dashboard level indicators are lagging metrics that could take several years to reflect the successes of institutions, the teams also developed a series of “progress” metrics to serve as leading indicators of gains made in each area of focus.

Finally, a series of promising practices that could be implemented or further studied for systemwide implementation were compiled to serve as strategies for achieving the ultimate goals of affordability, access and success.

	Dashboard Metrics	Progress Metrics	Promising Practices
Affordability	<ul style="list-style-type: none"> • On Time Graduation • Student Loan Default Rate 	<ul style="list-style-type: none"> • Transfer Agreements • Students taking 30 credit hours a year • Retention Rates • Enrollment by Pell status 	<ul style="list-style-type: none"> • Increase program-to-program articulation • Push for full-time students to take 30 credit hours per year • Promote open educational resources • Implement practices promoted by Complete College America • Study and implement math pathways • Study and make recommendations to the Board on co-requisite remediation • Study opportunities and possible implementation of meta-majors
Access	<ul style="list-style-type: none"> • Enrollment Equity Gaps • College Going Rate 	<ul style="list-style-type: none"> • Enrollment Equity Gaps by Race/Ethnicity • Enrollment Equity Gaps for Rural students 	
Success	<ul style="list-style-type: none"> • Graduates in Jobs with Sustaining Wages • Degrees and Certificates Earned 		

On Time Graduation

On Time Graduation is one of the most effective methods of reducing the cost of attendance at a college or university. Every additional year spent earning a degree or certificate is an extra year of tuition, fees and other associated costs. For many students, it is also an additional year of not earning full-time wages.

In 2018, 34.6 percent of students at state universities graduated within four years.⁴

As a result, extra time taken to earn a degree usually means additional expenses and less income than if a student completes on time and enters the workforce.

For this dashboard metric, *Building a Future* includes the four year graduation rates for first-time, full-time degree seeking freshman and transfer students.

At community colleges, on-time graduation is defined as students who earn an associate degree in two years or who transfer to a university. For technical colleges, students who complete within two years are counted as graduating on-time.

4-5 IPEDS

Certainly there are students whose circumstances require them to take additional time to complete their degrees or certificates. Adult learners, for example, may work full-time and spread out their course load over a longer period than a full-time student. Serving these populations in a way that meets their needs is important, so *Building a Future* will only count full-time students in the on time graduation metric.

State universities and community colleges have seen increases of 6.4 percent and 5.3 percent respectively in on-time graduation rates during the past five years. Technical colleges have experienced a decrease of 1.5 percent during the same period.

More than 50 percent of students at community colleges and technical colleges completed or transferred to a four year institution within two years.⁵

Progress metrics under the on time graduation dashboard metric will include the following:

- **Transfer agreements** implemented between community colleges and universities can help ensure that students who wish to begin pursuing a bachelor's degree at a community or technical college have a path to transfer credit to a university and graduate in four years
- **Students taking 30 credit hours a year**, since this is the course load required to graduate in four years from the vast majority of bachelor's degree programs in Kansas
- **Retention rates** from first-to-second year and second-to-third year, which are considered an indication of an institution's effectiveness at meeting the needs and expectations of students and can lead to higher graduation rates

Student Loan Default Rates

In addition to factoring prominently into the concerns expressed by students participating in the strategic planning focus groups, student loans are often at the center of national conversations about the affordability of higher education.

In Kansas, 57 percent of graduates from public universities took out student loans, which is identical to the national average for public universities. Of

those Kansas graduates with debt, the average amount of debt upon graduating is \$26,754, slightly below the national average of \$27,293.

For many students, a certain amount of loans may be an acceptable risk that they consider worthwhile because of the long term career prospects they gain through their education. However, it is concerning when graduates have to default on their loans due to the amount borrowed or their earnings.

Fewer graduates of Kansas public institutions default on student loans than the national average.

6.1 percent of graduates from public universities in Kansas and 12.8 percent of graduates from community and technical colleges default on student loans. Both of these rates are lower than the national averages for the four- and two-year sectors.⁶

Since most institutions already perform very well, *Building a Future* will compare student loan default rates to national sector averages and state averages from institutions outside the system, rather than expect year-to-year improvement from each institution.

Promising Practices

- **Increase program-to-program articulation.** This will help students who transfer from a two-year institution to a four-year institution be better prepared to complete their baccalaureate degree on time.
- **Push for full-time students to take 30 credit hours per year.** Students must average 30 credit hours a year if they wish to graduate on-time. This systemwide campaign will highlight the importance of taking 30 credit hours a year and encourage students to make sure that they are on track to graduate on time.
- **Promote open educational resources.** Textbooks can present a significant cost to students. This systemwide effort will help institutions share information and leverage common tools to offer students free course materials when possible.
- **Study and implement math pathways.** For many students, existing math requirements may prove to be less useful for their educational pathways and careers than alternative options. This practice will explore those alternatives and determine which ones may be better suited for certain programs.
- **Analyze possible efficiency measures through the Future of Higher Education Council.** These measures will include the physical footprint of universities and potential partnerships between institutions.

Enrollment Equity Gaps

As Kansas becomes an increasingly diverse state, it is more imperative than ever for the public higher education system to serve traditionally underrepresented student populations. These students include racial and ethnic minorities, in addition to low income and rural students.

In order to guarantee that the public higher education system is accessible to all of these groups, *Building a Future* will work to close gaps that exist in enrollment for these populations.

In particular, the plan will monitor three types of enrollment gaps that currently exist in the system.

First, it will compare enrollment of Kansas students by race and ethnicity to the overall population of the state to determine which areas of the population might be underserved.

18-24 year old resident Hispanic students are underrepresented at universities by 6 percentage points.⁷

Pell-eligible students face enrollment gaps ranging from 5 to 9 percentage points.⁹

It will also compare the percentage of 18-24 year old Kansans who qualify for Pell grants with the percent of 18-24 year old Kansas students served by the public higher education system who receive Pell grants.

Rural students face enrollment equity gaps in excess of 10 percentage points at two- and four-year institutions.⁸

Finally, the plan will compare the enrollment of Kansas students from urban and rural areas. Students who are from a county with fewer than 20,000 residents will be considered to have rural status.

7-9 American Community Survey, KBOR KHEDS Academic Year Collection



Image courtesy of Emporia State University

College Going Rate

The percentage of Kansas high school graduates who choose to continue their education after high school has been in decline during the past several years. There is likely a mix of complex factors that has contributed to this trend. During the second half of the 2010s, a historically low unemployment rate made it easier for students to obtain a job immediately after high school. At the same time, declining state funding for higher education shifted a larger share of the cost for college to students, making the cost of attendance a growing concern for families.

While the college going rate has declined, educa-

tion beyond high school has only increased in importance. Many of the high school graduates deciding to forego college to enter the workforce will be more vulnerable during economic downturns. For example, of the 7.2 million jobs lost during the Great Recession, 5.6 million were held by those with no education beyond high school.¹⁰

Building a Future will track the college going rate at a statewide level. While there are factors far be-

50.3 percent of Kansas high school graduates entered a public Kansas postsecondary institution within a year of graduation.¹¹ An additional 15 percent entered an out-of-state or private institution.

yond the control of the Board and institutions that impact this rate, it is nonetheless important to measure this rate and to take all possible steps to help additional students continue their education after high school at a university, community college or technical college.

Promising Practices

- **Implement practices promoted by Complete College America.** This initiative provides support and expertise to states and institutions in a variety of areas that can help underserved students enter an institution, be retained and ultimately achieve success there.
- **Study and make recommendations to the Board on co-requisite remediation.** This model can make college more accessible by giving academically at-risk students an early path to success.
- **Study opportunities and possible implementation of meta-majors.** The introduction of meta-majors may help students who are unsure about their academic plans or future careers begin to focus their studies and remain in college and on-track to graduate.

¹⁰ Georgetown University Center on Education and the Workforce, *America's Divided Recovery*, 2016

¹¹ KBOR KHEDS Academic Year Collection, KSDE

Graduates in Jobs with Sustaining Wages

Preparing graduates for successful careers is one of the most important functions of the public higher education system.

While the definition of a rewarding career will differ for every graduate, most will require at least a minimum level of income that allows them to be self-sustaining and provide for their needs. *Building a Future* sets this benchmark at 250 percent of the federal poverty level, meaning that in 2019, a graduate would have to earn \$31,225 to be in a job with a sustaining wage.

Five years after graduation, 84 percent of 2013 bachelor's degree earners from Kansas public universities were earning a sustaining wage. 71 percent of associate degree earners and 70 percent of certificate earners were also earning sustaining wages.¹²

One year after graduation, the average wages of graduates from all public universities in Kansas exceed the sustaining wage standard by at least \$7,360.¹³

The strategic plan will track the percent of graduates by sector and institution who exceed the sustaining wage level one year and five years after graduation. It will also look at the average wages of graduates by sector and institution as a progress metric.

¹²⁻¹³ KHEDS Academic Year Collection, Kansas and Missouri Labor Agencies

Degrees and Certificates Awarded

Foresight 2020 set an aggressive attainment goal of 60 percent for the state. As of 2017, 52 percent of working age adults in Kansas had a postsecondary credential. While the state has improved its attainment rate overall and relative to the nation (47.6 percent attainment), there remains much progress that must be made to hit 60 percent or meet the state's economic needs.

The Kansas public higher education system awarded 45,008 degrees and certificates in 2019, the highest number on record.

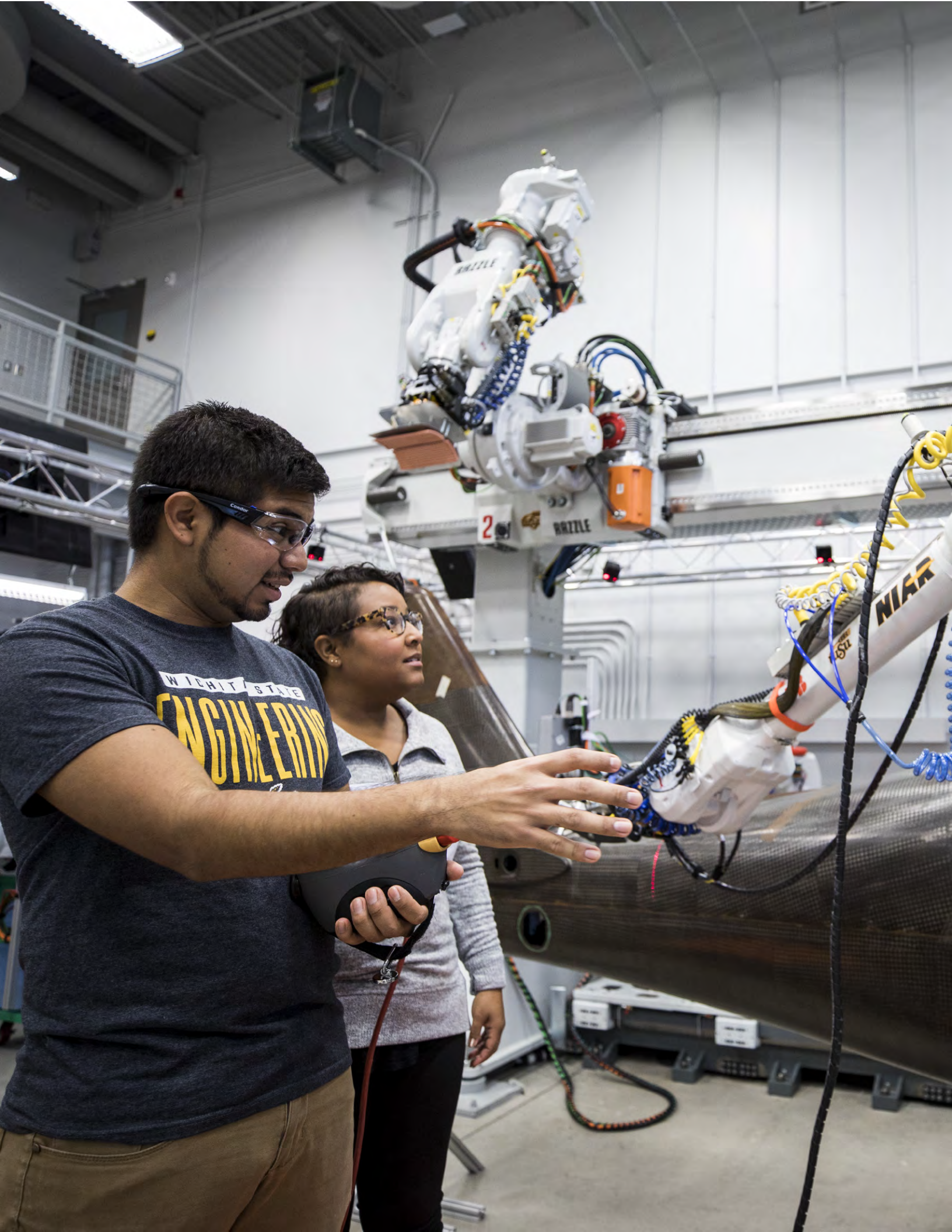
With *Building a Future*, the Board is adjusting its attainment goal to a number of degrees and certificates awarded by the public higher education

system over a set period of time. To determine this number, the Regents are leveraging the experience of the Advantage Kansas Committee of the Governor's Council on Education. This committee consists of Regents, members of the Kansas State Board of Education and the Kansas Chamber of Commerce whose goal is to ensure that education and training in Kansas meet the needs of the state's employers.

In addition to tracking the overall number and types of credentials awarded, *Building a Future* will monitor equity gaps that exist in completion. Currently, there are significant disparities in graduation rates between white students and Hispanic and African American students at both four and two year institutions. There are also smaller equity gaps that exist for Pell-eligible and rural students. The plan will track these completion gaps for 150 percent time graduation rates (six years at a university and three years at a community college or technical college).



Image courtesy of Emporia State University



Business

The second pillar of *Building a Future* focuses on the advantages higher education can provide to Kansas businesses. Based on the feedback provided by the focus groups of business leaders, this pillar emphasizes the crucial role of Kansas colleges and universities in developing a talent pipeline that meets the demands of employers and the state’s economy and promotes the unique capabilities for innovation that the system can leverage in support of industry.

As with the family pillar, the Board office coordinated with working groups to develop dashboard and progress metrics for the business pillar, along with promising practices to support the objectives of the pillar and submit proposals first to the System Council of Presidents and later to the Board Governance Committee.

Within the areas of focus, the following dashboard metrics will track progress in the business pillar:

- **Graduates in High Demand, Sustaining Wage Fields** and the success of **Special Initiatives** related to the workforce as indicators of the talent pipeline
- **Industry Sponsored Research** as the indicator of innovation.

Since dashboard metrics often lag, progress metrics were again selected to serve as early indicators of movement. The promising practices in the business pillar require particular flexibility and ongoing evaluation to make sure that the system remains responsive to the needs of businesses across Kansas.

	Dashboard Metrics	Progress Metrics	Promising Practices
Talent Pipeline	<ul style="list-style-type: none"> • Graduates in High Demand, Sustaining Wage Fields • Special Initiatives 	<ul style="list-style-type: none"> • Enrollment in select programs leading to high demand, sustaining wage jobs • Excel in Career Technical Education • Engineering Initiative • Nursing Initiative 	<ul style="list-style-type: none"> • Institutions will select three to five programs that meet the sustaining wage, high demand criteria • The Board and institutions will continue to explore opportunities for partnerships with the Legislature on special initiatives
Innovation	<ul style="list-style-type: none"> • Industry Sponsored Research 		

Talent Pipeline

Graduates Prepared for Jobs in High Demand, Sustaining Wage Fields

A key measurement for how well the public higher education system is meeting industry needs is how many graduates are equipped with the skills and credentials to take jobs in high demand occupations. *Building a Future* will track the number of graduates who earn certificates or degrees that prepare them to enter fields that are difficult for Kansas businesses to fill and that pay, on average, a sustaining wage.

This metric will highlight several industries that are of particular importance to the Kansas economy, as identified by the Advantage Kansas committee of the Governor's Council on Education:

- Agriculture (including animal health)
- Architecture, Construction, Engineering
- Advanced Manufacturing (including aviation)
- Business and Financial Services
- Computer Science (including cybersecurity)
- Education
- Energy
- Health Sciences

Since each institution and the region it serves is unique, institutions will have flexibility to choose fields that meet the needs of employers in their region.

Special Initiatives

Under *Foresight 2020*, the higher education system formed several successful partnerships with the Kansas Legislature to address specific workforce needs. *Building a Future* will continue to monitor and support these partnerships and pursue additional opportunities for similar initiatives.

Excel in CTE

In 2012, the Legislature enacted the Excel in Career Technical Education program to provide state-financed college tuition for high school students in postsecondary technical education courses. The success of this program has far exceeded expectations with participation more than tripling during the eight years it has been in operation. In 2019, the 13,675 participating high school students took 105,084 credit hours and earned 1,803 postsecondary credentials.

13,675 high school students participated in Excel in CTE in 2019, an increase of three and a half times over the baseline year.



Image courtesy of Seward County Community College

University Engineering Initiative

In 2012, the Legislature recognized the competitive need for an increase in the number of engineering graduates in Kansas and committed an initial investment of \$105 million during the first 10 years of the initiative to ensure engineering industry partners find the new talent, designs, and techniques needed to fuel economic growth and

With 1,496 engineering graduates in 2019, K-State, KU and Wichita State have already surpassed the goal set for 2021.

business success in Kansas. The participating universities have already surpassed their 2021 goal.

Nursing Initiative

The Kansas Nursing Initiative was developed to address the growing nursing shortage in the state, providing needed resources to nursing education programs to enable them to increase their capacity to instruct additional nursing students.

Today, subject to annual appropriation from the Kansas Legislature, \$1.8 million is available to both public and privately funded educational institutions with registered nursing programs. Grant funds are used for faculty development and nursing lab supplies with the goal of improving program quality and student success.

Promising Practices

- Each institution will select three to five programs to measure as part of the high demand, sustaining wage dashboard and progress metrics. These programs should fit the mission of the institution and lead to jobs that are in high demand by businesses within the region and pay, on average, a sustaining wage. Institutions will continually evaluate regional economic needs and add programs as necessary.
- The Board and institutions will explore opportunities for legislative partnerships modeled upon existing successful partnerships to meet critical workforce needs.

Industry Sponsored Research

The Kansas public higher education system is unique in the state for the quality and breadth of research it provides. From 2013-2017, federal funding for research activities declined by \$12.3 million at the three research universities in the system. However, they have offset that decline by obtaining more support for their research activities from businesses, experiencing an \$18.2 million increase in industry sponsored research during the same period.¹⁴

Building a Future will measure overall research funding and its sources.

Kansas public research universities increased industry sponsored research by \$18.2 million from 2013-2017.

14 Higher Education Research and Development (HERD) Survey, FY 2013-2018





FOR A MORE PROSPEROUS FUTURE
**FORGE
AHEAD**
WELCOME TO THE FOUNDRY

Economic Prosperity

The final pillar of *Building a Future* supports the state’s economy. It will highlight the indirect benefits of higher education to the Kansas economy and the overall prosperity of Kansans, as well as ways in which public postsecondary institutions are intentional partners in growing the Kansas economy.

The growing interest in defining the public good of public higher education has led policy makers at the state and national level to begin asking how the capabilities and innovation of public higher education can be leveraged in new, direct and creative ways to enhance the general economic prosperity of communities on a local, regional, and statewide basis.

Each of the state universities has developed programming to advance the economies of their communities and the state, but this has not until now

been intentionally addressed and measured by the Kansas Board of Regents.

Like the needs of Kansas families and Kansas business, the need for Kansas and its communities to prosper will be more intentionally addressed by the Regents in *Building a Future*. With support from the Board, universities will continue to serve as innovative, intentional partners in building state and local economic prosperity.

This pillar will feature dashboard and progress metrics similar to the family and business pillars. However, since each institution’s economic development capacity and strengths is unique, it will rely upon common strategy considerations instead of systemwide promising practices. These considerations will inform universities’ decisions about economic development activities.

	Dashboard Metrics	Progress Metrics	Strategy Considerations
Intentional Economic Activity	<ul style="list-style-type: none"> Family sustaining jobs created Capital investment generated 	<ul style="list-style-type: none"> Existing business expansion Business attraction Business formation/entrepreneurial endeavors 	<ul style="list-style-type: none"> Is there a global (international) interest in the area of intentional economic activity? What are the defining trends or key characteristics of this interest? How will you leverage global, national and regional interests? 2. Is there a national interest in the area of intentional economic activity? What are the defining trends or key characteristics of this interest? How will you incorporate these efforts as part of the university’s programming and overall strategy?
Community and State Benefits	<ul style="list-style-type: none"> Non-monetary benefits of higher education for individuals and society 		

Intentional Economic Activity



As part of *Building a Future*, each state university will articulate economic prosperity efforts into its institutional plan. Programming concepts at the institutions might include strategic private sector partnerships that concomitantly advance university, public and private sector interests; company attraction; existing business advancement and growth; new company creation; and innovation district creation for university-company interaction, entrepreneurial activities and start-up company location.

While economic development efforts will look very different across the system, each state university is already engaged in activities similar to these programming concepts. *Building a Future* will compile the results of these initiatives and report on the number of **Family Sustaining Jobs Created** and **Capital Investment Generated** as dashboard metrics.

Family Sustaining Jobs Created

The jobs captured under the Economic Prosperity pillar must be new jobs that are generated as a result of intentional development and corporate partnership efforts on the part of state universities. These jobs must also meet a minimum annual wage standard of 250 percent of the federal poverty level and be located in Kansas to guarantee that the state is deriving benefit from the jobs.

Capital Investment Generated

Capital investment will serve as the second dashboard metric. Through Small Business Development Centers, surveys or other data gathered from corporate partners, universities will attempt to quantify the amount of private capital invested in Kansas as a result of their economic development efforts and partnerships.

Other Core Elements

In addition to the dashboard metrics, universities will track existing business expansion, business attraction, business formation and entrepreneurial endeavors, along with any jobs or investment associated with those projects.

Intentional Programming

Each university conducts different programming activities related to economic development. Some leverage Small Business Development Centers, while others leverage business incubators or innovation spaces. These different approaches reflect the broad capabilities of the system.

A summary of each university's initial plan follows.

EMPORIA STATE UNIVERSITY

Potential ways for ESU to contribute to the economic prosperity of Kansas follow.

Family Sustaining Jobs Created

Universities have not historically been in the business of creating jobs. As noted in the Building a Future draft, developing talent pipelines that meet the demands of employers and provide graduates with job opportunities with sustaining wages has been, and should continue to be, an area of strong focus for universities. Unfortunately, this approach does not generally create new jobs, it refills current jobs due to turnover. Fortunately, many of the universities in Kansas already have some experience with job creation to draw upon.

Areas to consider for the creation of jobs:

- Promote and expand the Kansas Small Business Development Center (KSBDC). This would support the opening of new businesses and the expansion of current businesses.
- Promote and expand existing programs such as Studio e, Venture Alliance, and Tech Central.
- Build on current talent pipelines but focus on educating employers about the value that the creation of a new position could provide. For example, by utilizing data analytics, many employers could improve their current operations enough to justify creating an analyst position at their organization. Many are just unaware of the potential benefits the position could provide.
- Establish new relationships with small and medium organizations with a focus on educating those employers about the value that the creation of a new position could provide while at the same time creating a talent pipeline.
- Work with other universities to leverage exper-

tise and resources to accomplish the previous two items. This type of collaborative effort would support the spirit of Pillar3 by breaking from the traditional, individualistic university programming within the state of Kansas.

- Work collaboratively with other universities, local and state entities to identify potential areas for job creation without limiting university involvement to specific geographic areas.
- Some areas of focus at ESU include, but are not limited to, data analytics (marketing, information systems, geospatial), cyber security, and biological sciences.

Areas to consider for capital investment generated include the following:

- Provide increased support for government research grants.
- Work with other universities to leverage expertise and facilities to improve research grant applications. This idea breaks from the traditional, individualistic university programming within the state of Kansas.
- Identify formal private research grant opportunities. Working with other universities could improve the quality of the grant applications.
- Identify and cultivate informal private grant opportunities. For example, ESU's Koch Center for Leadership and Ethics. Repetitive, but working with other universities could prove helpful.



FORT HAYS STATE UNIVERSITY

Fort Hays State plans to leverage:

- Skills of modern technology and cybersecurity workforce, equipped to work remotely
- Robust information technology infrastructure
- Attractive cost of living, safety, and strong educational system
- Strong on-line technology and innovation degree programs
- Robbins Banking Institute at FHSU
- Health Informatics
- Existing Entrepreneur Mindset trained faculty at FHSU
- Amazon Web Services (cloud computing), Cisco, and Palo Alto cybersecurity curricula
- FHSU Department of Informatics NSA Center for Academic Excellence in Cyber Defense Designation

Considerations

The cybersecurity market is expected to increase to \$125 billion in 2020, with an expected unemployment rate of zero. Pillars of innovation economies include social and business networks; research institutes and universities; relevant industries; and government policies. Fort Hays State University is the host of the Kansas Small Business Development with access to regional Small Business Development Centers (SBDC) throughout the state, and ties to state and federal funding.

Economic prosperity occurs through direct growth metrics (e.g., job creation and business creation) and also through risk and loss mitigation by protecting existing business and architecture from loss

that inhibits growth or threatens existing business survival. A cybersecurity breach or loss is estimated to cost on average \$117,000 per event, which would not be survivable by many Kansas small businesses.

Brief Proposal Detail

- Build a cybersecurity and cloud computing focused innovation center with a cybersecurity business incubator
- Conduct systematic evaluations of entrepreneurial mindset to drive incubator recruitment
- Goal to grow cybersecurity “clusters” by working with local governments to improve business climate and policy considerations for business, encourage greater system-wide collaboration to leverage regional and institutional strengths for more collaborative good
- To deploy and support SBDC efforts statewide to train small businesses on cybersecurity measures to promote growth through protection of assets and infrastructure
- More system-wide and statewide grant proposal development centered on cybersecurity

Fort Hays State may also consider benefits led by the Center for Civic Leadership (CCL) to strengthen communities through engagement and collaboration to address cybersecurity as a human rights issue and as a necessary component for promoting quality of life to strengthen communities through increased awareness and civic participation.

KANSAS STATE UNIVERSITY

Kansas State University is the World's foremost Global Food and Biosecurity Science University. Unlike anywhere else in the world, K-State has the talent and specialized assets to successfully solve problems across the entire food chain including production, processing, packaging, distribution, and food safety. It is a unique innovation ecosystem.

In a time when the world is challenged by highly infectious plant and animal/zoonotic disease, K-State is the only university in the world that has on its campus Bio-Safety Level 4 animal (NBAF) and Bio-Safety Level 3/Bio-Safety Level 3 agriculture (Pat Roberts Hall Biosecurity Research Institute, BRI) high containment research facilities that provides its scientists a safe and secure location to study high-consequence pathogens affecting plants, animals and food products.

Kansas State University's Economic Prosperity initiative will aggressively leverage the institution's global preeminence for the purposes of concomitantly advancing the university's land-grant mission and creating vast new pipelines of direct investment coming into the state and direct jobs.

A concentration of excellence in the innovation ecosystem includes National Bio and Agro-defense Facility (NBAF – USDA); National Arthropod-borne Animal Disease Research Laboratory (USDA); Kansas State University College of Agriculture (top five nationally); College of Veterinary Medicine. (top five nationally); Pat Roberts Hall Biosecurity Research Institute (BRI) – BSL-3Ag (plant, animal, and food select agent containment); Kansas Wheat Innovation Center (global renown); Kansas Department of Agriculture Research Laboratory; Kruse Feed Technology & Ross Milling & Grain Science Complex (global renown); KSU Veterinary Diagnostic Laboratory (Federal Tier1 Select Agent Di-

agnostic Lab); and the Bioprocessing & Industrial Value-Added Products (BIVAP) Innovation Center

Sectors of Competitive Advantage

- Intelligent Food and Agriculture Systems Innovation
- Digital Agriculture and Advanced Analytics
- Biosecurity and Biodefense

Key Partners

- Kansas Department of Commerce
- KSU Foundation
- Manhattan Area Chamber of Commerce/City of Manhattan
- Knowledge Based Economic Development partnership
- NBAF/BRI
- KSU Technology Development Institute
- KSU Innovation Partners

During the past few years, K-State has engaged the public and private sectors in ways that have given it specific knowledge of who cares about the university's assets, talent, and innovation in food and biosecurity science.

Paths to success include:

- Growth of the university research enterprise
- Development of strategic corporate partnerships
- Engagement with global industries and global government agencies
- Advancement of existing Kansas net-importer-of-dollars businesses
- Attraction of mature companies
- Development of emerging companies
- Creation and incubation of new businesses

Pittsburg State University

Pittsburg State's plan for continued advancement of shared economic prosperity will focus in three primary areas: research and development and commercialization through development of the new National Institute for Materials Advancement, technology workforce development and training through growth and innovation as a global leader in applied technology education, and intentional and strategic engagement, connectivity, and resource acquisition with the local, regional and global economy and all levels of government through University Strategic Initiatives and Block22.

- National Institute for Materials Advancement
 - Center of excellence in research development in advancing materials by connecting and facilitating successful collaboration and maximized impact among and between key institutional assets:
 - Tyler Research Center
 - Polymer Chemistry Initiative
 - Kansas Technology Center
- Technology Education & Training
 - Building on tradition of excellence as global leader in applied technology education and driven by connectivity with industry partners and demands of ever-changing economy, PSU will continue to adapt and innovate in the curriculum and delivery of technology education and training.
 - Development, collaboration, and distribution of technology education through connectivity and maximized impact
 - Degree production, industry certifica-

tion and training, and K-12 linkage

- University Strategic Initiatives & Block22
 - Connect and align the university with community, regional and global economy to maximize impact and shared economic prosperity by:
 - Leveraging internal university assets to facilitate delivery of University knowledge, innovation, and research
 - Connecting university with government, NGO, and private industry funding entities to secure resources to advance training, research and development, and commercialization.

These initiatives all support the Board's key economic prosperity targets in the following ways:

- Alignment with state, national and global needs and economic trends
- Expansion of the state economy through capital investment and direct job creation
- Aligned with national/global university expertise
- Philanthropic interest viability
- Alignment with state and federal government investment goals
- Demonstrated broad regional, national and global private sector investment interest and economic development opportunities

On May 1st, the University of Kansas hired a new Vice Chancellor of Public Affairs and Economic Development, placed in the Office of the Chancellor. With this redefined position that includes Economic Development, the university is recognizing the critical role it plays in the economic prosperity of the state and region. It also signals a strategic alignment with the Regents' economic prosperity pillar in supporting the economic recovery and economic advancement of the state as a top university priority.

Given that economic development is a new Chancellor-supported priority that spans all campuses, efforts are underway to construct a university strategy that delivers a bold new approach. As the strategy is defined, organizational structures and processes will be established to support its vision. A guiding principle in this process is to have KU think of (itself) as a driver in the State economy. The following describes the plan moving forward, including key areas where the university will likely invest.

Stakeholder engagement to ensure market alignment will include the development of an economic prosperity advisory board to include industry, government, community leaders and alumni; development of an internal university prosperity council; alignment of university strengths with stakeholder priorities; partnership with EnterpriseKC and the Regents to develop a Cybersecurity Brain Trust; and a purposeful Kansas City and statewide strategy in addition to Lawrence-based assets.

Curricular and cultural enhancement will also support entrepreneurship and innovation. KU's new strategic planning/strategic doing process, called Jayhawks Rising, launched in February. Ten workgroups, called Design Teams, have formed to carry

out specific charges. Rather than creating a specific design team, economic prosperity will be a focus across teams to ensure broad input and strategic alignment. Areas for potential curricular and culture enhancements are detailed in the university's plan submitted to the Board.

Job Creation and Capital Investment efforts will include the following steps:

- Leverage federal programs to supplement and complement education efforts to develop SBIR/STTR funding and evolve them into capital investment.
- Re-brand and expand BTBC/KUCIP to add through phase III development (75k sq ft) and accelerate horizon for future capacities.
- Enhance prioritization of targeted recruitment strategies for corporate R&D relocation to KU Corporate Innovation Park, with overarching strategy to align with university priority areas.
- Actively pursue marketing of KU technology to external stakeholders including both licensing and collaborative research opportunities with industry. Promote and support faculty and graduate student awareness of entrepreneurial opportunities associated with their research.
- Drive research at KU areas of expertise in alignment with federal agencies priorities. Research dollars will support graduate students, faculty and the development of technology.

KU will also focus on economic prosperity and entrepreneurship in a number of additional areas including faculty and student recruitment strategies, policy enhancements, alumni engagement, and tracking of metrics. These are outlined in the plan submitted to the Board.

Wichita State's Economic Prosperity Plan will include four components that are part of the convergence sciences and meet state and federal goals

1. Innovation Campus

- Purpose: Co-location of industry: Airbus, Boston Consulting Group, Dassault Systemes, Deloitte, Hexagon, NetApp, Sedgwick County, Spirit AeroSystems, Textron, Wesley Healthcare, City of Wichita, YMCA
- Thrusts: Co-location of private sector and public sector entities to increase experience-based undergraduate and graduate engagement, collaborative efforts with industry, launching of microenterprises, and research programs to support the economic development and global competitiveness of the Wichita metropolitan area, the state of Kansas and the nation
- Promising Innovations: Applied and Experiential Learning
- Potential capital investment and direct job creation in Advanced Manufacturing; Professional, Scientific, and Technical Services; Health Care and Social Assistance; Accommodation and Food Service; and Public Administration.

2. National Institute for Aviation Research (NIAR)

- Purpose: NIAR's mission is to conduct research, transfer technology and enhance education for the purpose of advancing the nation's aviation industry, and to assist non-aviation industries that may benefit from aviation-related technologies
- Thrusts: Commercial and defense aviation. Composite and advanced materials, structures, fatigue and fracture, crash dynamics, aerodynamics, and aging aircraft. The FAA has designated WSU/NIAR as the lead institution for the FAA Center of Excellence in Advanced Materials and serves as the secretariat for the Composite Materials Handbook (CMH-17)
- Promising Innovations: Advanced materials; Smart factories (IoT); Digital design, simula-

tion, and integration; Advanced robotics; Additive manufacturing (3D printing/scanning); Augmented reality

- Potential capital investment and direct job creation in Advanced Manufacturing, Aviation and Defense and Defense/National Security

3. National Institute for Digital Transformation

- Purpose: NIDT's mission is to expand the high-skill information technology talent pipeline and create capacity to upskill incumbent workers as knowing digital skills represent a key channel to productivity gains
- Thrusts: Cyber range; product development and testing; Software development; Security operations center; Visual simulation studios; Autonomous vehicles
- Promising Innovations: Predictive analytics; Smart, connected products (IoT), Smart factories (IoT), Digital design, simulation, and integration; High performance computing
- Potential capital investment and direct job creation in Professional, Scientific, and Technical Services Advanced Manufacturing

4. FirePoint

- Purpose: FirePoint's core efforts focus on identifying, aligning and exploiting applied research and development to enable the Army of the future to be ready to deploy, fight and win decisively against any adversary on the multi-domain battle-space
- Thrusts: Integrate crucial expertise and technology to create successful outcomes for warfighters
- Promising Innovations: Technology transfer; Technology diffusion
- Potential capital investment and direct job creation in Defense/National Security

Beyond Earnings

Wages and employment are two of the most important and visible benefits of education beyond high school. However, benefits for individuals and by extension the Kansas economy reach far beyond these measures. Continuing education after high school leads to advantages for individuals on a number of levels.

Improved health outcomes

More than 60 percent of associate degree and more than 70 percent of bachelor's degree holders report excellent or very good health, compared to just 50 percent of those with a high school diploma only.¹⁵

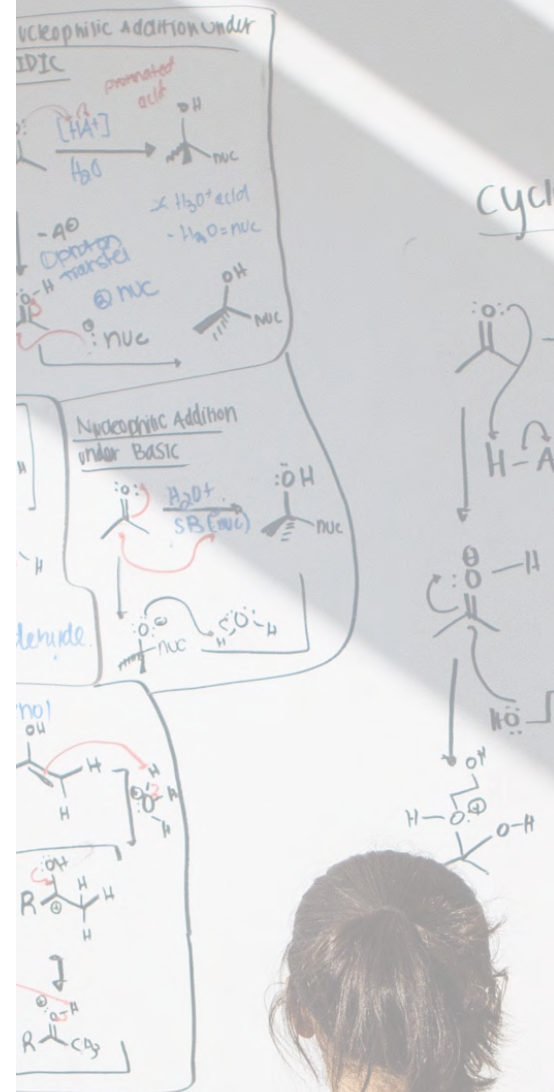
Deeper civic engagement

Individuals with associate, bachelor's or advanced degrees are more likely to volunteer and more likely to participate in community organizations such as school groups, Parent-Teacher Organizations and more.¹⁶

Additional state benefits

Those with education beyond high school also generally contribute more in taxes than they receive. The average associate degree holder, for example, contributes \$170,000 more in taxes during the course of their lifetime than they receive in direct benefits.¹⁷ This net contribution increases for bachelor's and advanced degree holders.

Community and State Benefits



Conclusion and Acknowledgements

Conclusion

The Kansas public higher education system has made great strides in many areas during the past decade. *Building a Future* seeks to maintain that momentum and identify additional ways that colleges and universities can better serve Kansas students and employers. In focusing on Kansas families, businesses and economic prosperity, the new plan positions the system to maximize its impact on the state through a series of promising practices and metrics targeted to these three areas.

Building a Future will not be a static plan, and instead gives the Board flexibility to adjust metrics and practices as needed. In particular, the Economic Prosperity pillar will remain a work in progress throughout the implementation of the plan as universities identify new opportunities to grow the state's economy.

The Board office looks forward to continuing to work with universities and colleges to implement *Building a Future* and leverage the power of the public higher education system to create a prosperous future for families, businesses and the entire state of Kansas.

Acknowledgements

The Kansas Board of Regents would like to thank the many people who gave generously of their time and expertise to support the development of this plan.

First, thanks to the business and community leaders, high school students, parents, counselors and teachers who met with Regents and Board office staff to share their perspectives on higher education. Because of the feedback these stakeholders provided, *Building a Future* will help the higher education system better meet the needs of Kansans and generate prosperity for all in the state.

The Board also thanks the many representatives from across the system who helped develop the details of the plan. The System Council of Presidents and System Council of Chief Academic Officers provided extensive feedback with support from numerous staff at institutions. The Economic Prosperity Working Group assembled by the university CEOs continues to refine the plan's third pillar as we work to ensure that the system continues to be a powerful engine of economic growth.

Finally, thank you to the Board office staff, especially the Data, Research and Planning (DRP) team. Strong data and the ability to measure progress is the foundation upon which any good plan is built. The efforts of DRP to ensure that the Board has access to the quality data needed to evaluate challenges, identify success and make decisions allow *Building a Future* to be a living plan that the Board can adapt to meet the needs of students and employers.

Notes

