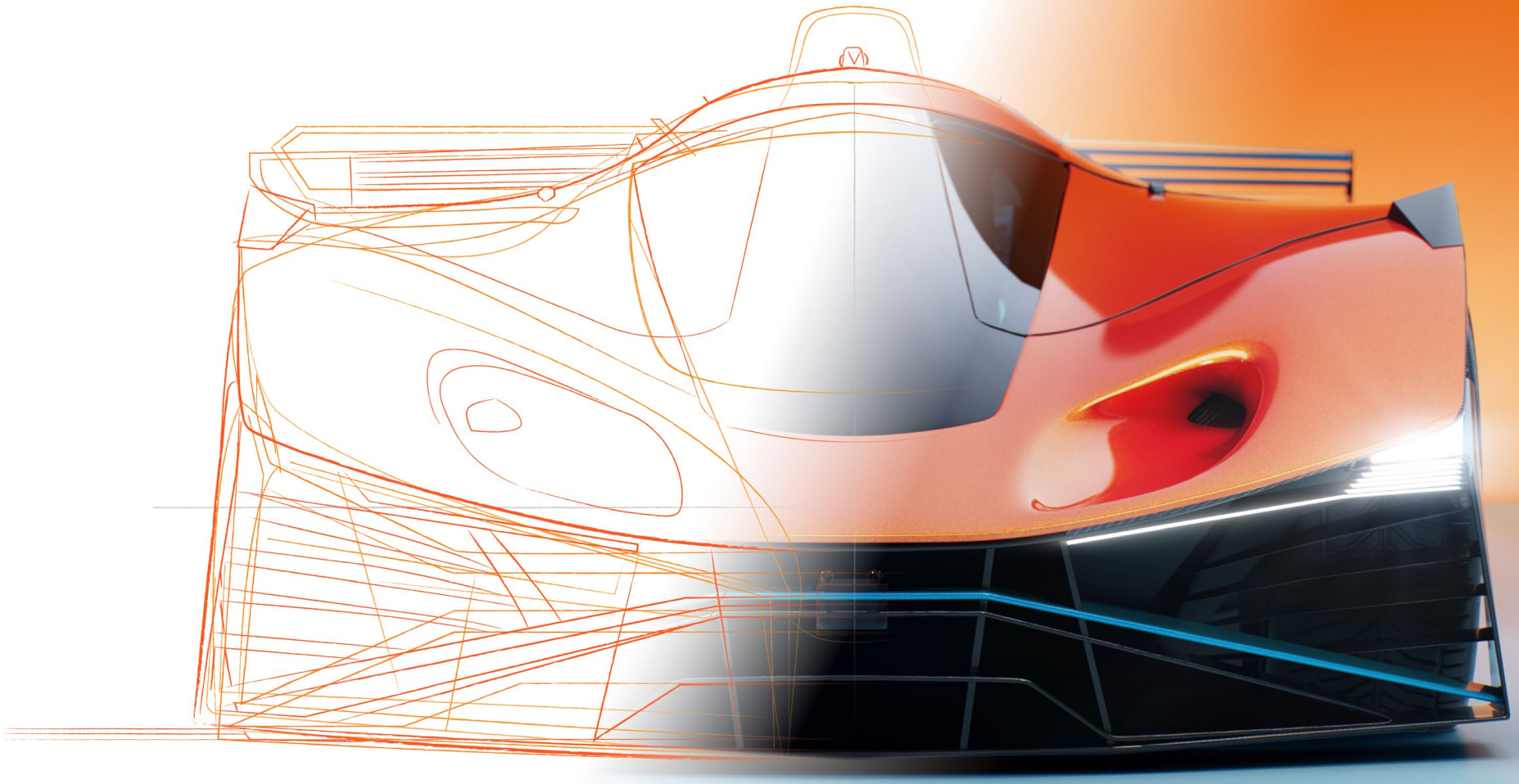
ACADEMIA

FUTURA



ELSEVIER

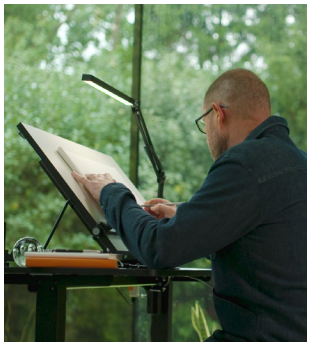
Research Intelligence

HIGH PERFORMANCE NEVER STOPS TRANSFORMING

CONTENTS

INTRODUCING FUTURA

Experience the future of academic performance, as engineered by academic leaders around the globe. *Academia Futura* provides a compelling vision for what higher education can be and can achieve at peak performance.



Ed Stubbs, Automotive Design Educator, Founder Sketch VR, in the studio

Academia plays a critical role in society but one that is not always recognized and appreciated. On top of challenges such as reduced central funding, declining enrollments and caps on international movement of students, universities and other institutions face scepticism from politicians and the public about their mission and whether they provide value for money.

A 2023 Gallup poll in the US, for example, found there had been a marked decline in public trust for colleges and universities from 2015 to 2023. Just 36% of people said they have "a great deal" or "quite a lot" of confidence in higher education, down from 48% in 2018 and 57% in 2015.

And earlier this year, the UK's Institute for Fiscal Studies warned that the nation's policymakers face "difficult choices on higher education funding, with tuition fees frozen and international student recruitment falling." Fee caps have since been removed, yet the increase was modest and financial challenges persist.

Aware of these pressures, academic leaders realize that their community must evolve to remain dynamic, relevant and competitive in a rapidly changing world.

As one Vice Chancellor of a UK university writes: "Our landscape is shifting fast as global and societal challenges proliferate. Public and research funding for universities is being squeezed and global competition is higher than ever. This demands that our sector steps up its game and makes clear the wider benefits universities can bring."

Hearing From Academic Leaders

In response to this challenge, we investigated how academic leaders are shaping their institutions for the future. Our survey asked 450 academic leaders from 20 countries to evaluate their priorities and to judge how well their institutions were performing on each of these goals.

The primary line of inquiry revealed that academic leaders are focused on digital transformation, developing global networks and building sustainable institutions, while consistently recognizing the importance of excellent graduate outcomes.

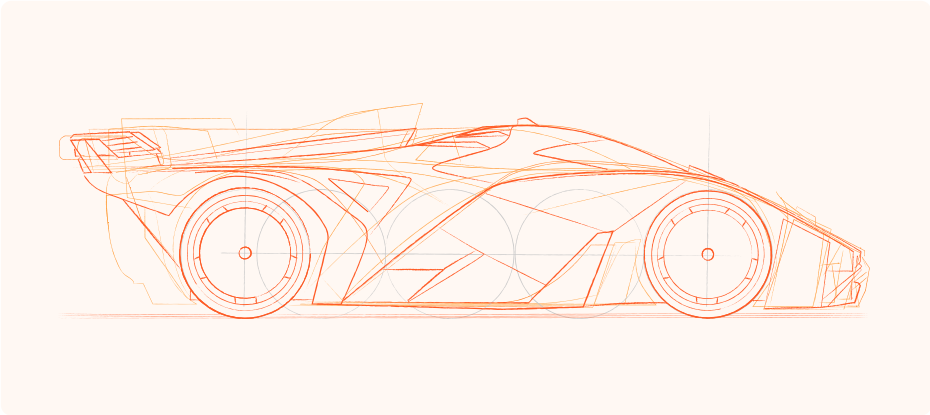
Whilst there is lingering circumspection about artificial intelligence (AI), they see that digital transformation can convert the potential of new technology into tangible performance improvements across an institution's operations. Global networks support and nourish education and research for maximum impact. And sustainable practices — in all senses of the term, from financial security through diverse revenue streams to environmental protection — build resilience into institutional strategy by providing a stable platform to make plans for the future.

Across all priority areas, academic leaders recognize the immense opportunity and pressing need to drive further progress.

As well as analyzing the priorities and progress identified by academic leaders, we also quantified which they thought had the greatest transformational potential — the ability to "drive organizational transformation and significantly contribute to the institution's overall goals."

As expected, the results showed a lot of overlap: there is high alignment between the primary objectives and those deemed to have the highest transformational potential. Excellent graduate outcomes topped the list, and digital transformation, global networks and sustainability all featured prominently.

However, there was an interesting outlier. Academic excellence in knowledge creation and research outputs (bibliometrics) was rated to have the second highest transformational potential, despite ranking just 15 on the list of academic leaders' priorities.



Academia Futura — from sketch to actualization

84%

of academic leaders say effective digital transformation is a top priority for their institution

Only **48%**

report good progress

Conceptualizing High Performance

Looking at these results holistically has enabled us to visualize how academia could transform in the future. This is not an abstract vision based on data points but a tangible model capable of real performance.

To do this, we turned to an analogy of automotive design. By conceptualizing academia through this lens — as a complex system of interdependent components — we hope that it becomes possible to understand the issues more contextually. After all, cars, like many complex systems including universities, face an increasingly competitive and changing environment. In response, such systems must continue to incrementally transform and optimize to maintain high performance, building their capabilities and capacity, and drawing on the latest technological advances.

To show what academia could become if progress is made to fulfill the transformative potential of all the key priorities academic leaders identified in our survey, we have developed the concept of *Academia Futura*.

Futura represents an academic community that is optimized for performance. Digitally enhanced, networked and sustainable, it can convert intellectual potential and thinking into impact faster and more efficiently. Presented as a concept vehicle, it's a high-performance machine, designed by academic leaders, engineered to accelerate universities forward into the next decade.

This is not a distant concept; its principles are at work today. Academic institutions are already charged with transformative potential. Some have charted their unique path forward, while others are still finding their way.

This report will examine the top five objectives that academic leaders think have the most potential for change. It will consider whether academic excellence in knowledge creation (bibliometrics) should still be considered progressive in the context of more blended approaches to research evaluation and look at the advent of Fourth Generation Universities.

Critically, it will identify the areas that academic leaders believe will be the most critical to transform their institutions and set a course for the future.

Academia Futura is a vision of what could emerge. We invite you to experience it.

TRANSFORMATIONAL OBJECTIVES

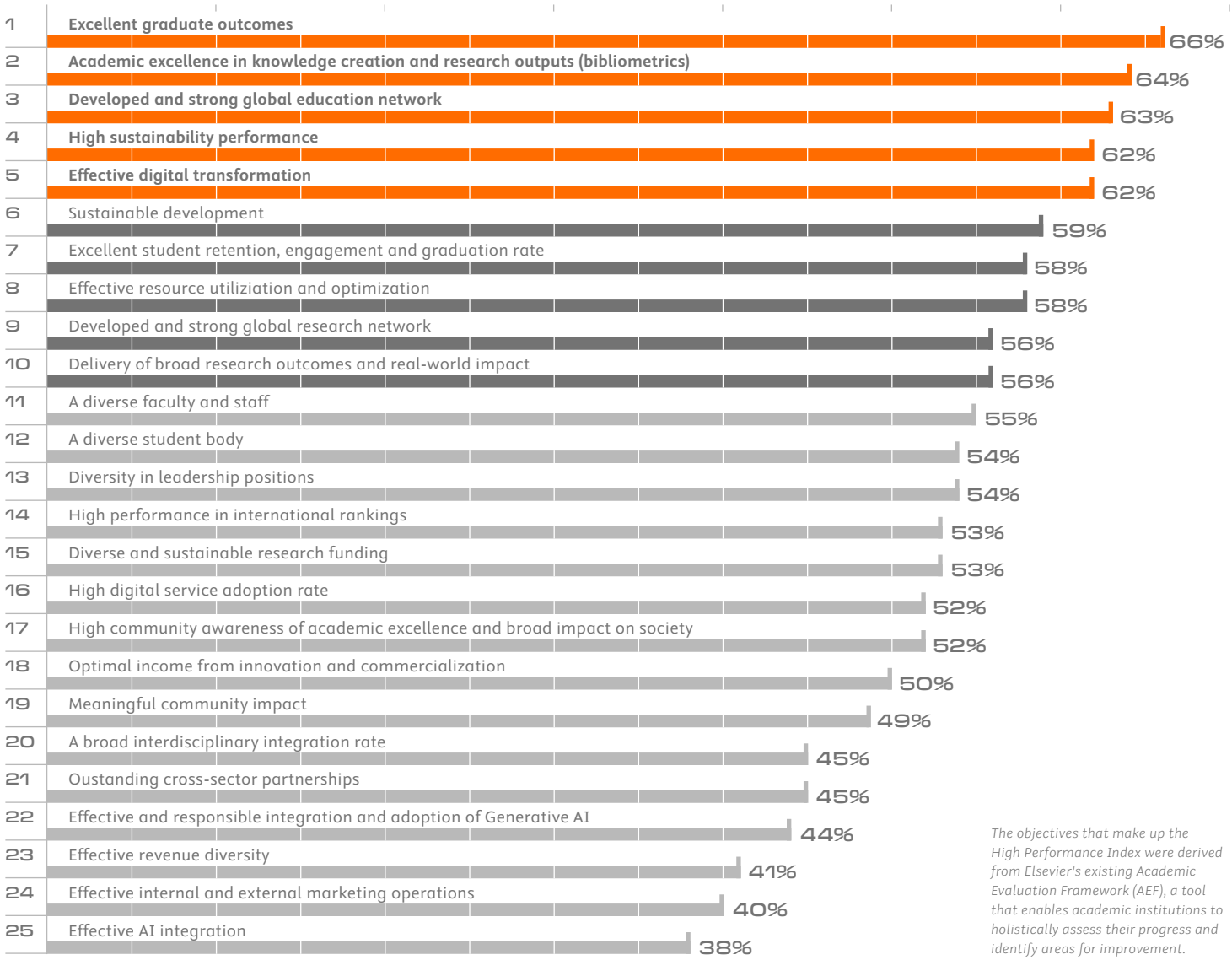
Using conceptual thinking, the pressing needs of academia can be more clearly determined, allowing an achievable and ambitious plan to be created.

***Futura* is based on potential:** identifying and unlocking what academia can do to continue to improve its performance — just as automotive engineers might rework the most important features to create a next-generation car. But what are those components? And where should academic leaders focus their efforts to maximize impact?

The parallels between redesigning a vehicle and rethinking academic performance are surprisingly striking. In both cases, incremental changes can have serious impact. To help understand where the greatest opportunities lie, we asked academic leaders which of their objectives have the most transformative potential. And, to help build the *Futura* concept, we reimagined each objective as an automotive component.

Academic leaders say that they want digitally enhanced, networked and sustainable institutions. To achieve that — and make *Futura* a reality — here are the five objectives they've rated as having the most transformational potential. The potential of each objective is juxtaposed with both priority ascribed and progress made.

25 HIGH-PERFORMANCE OBJECTIVES RANKED BY TRANSFORMATIONAL POTENTIAL



The objectives that make up the High Performance Index were derived from Elsevier's existing Academic Evaluation Framework (AEF), a tool that enables academic institutions to holistically assess their progress and identify areas for improvement.

TRANSMISSION SYSTEM

EXCELLENT GRADUATE OUTCOMES

While universities have multiple missions, education remains a core driver for most. Graduate outcomes, such as student satisfaction, graduate earnings and employment rate, are a key indicator of institutional success. Yet our survey showed that 43% of academic leaders do not feel their institution is making good progress in improving them. This is a challenging area to improve, because of complications like a mismatch between graduate skills and jobs, and economic factors that prevent graduates from taking career risks.

The quality of education is paramount to drive this transformation, says a Director of Academic IT & Software at a university in the Middle East: "Higher education never viewed students as customers," they say. "But they are purchasing products and the product is education. So, this is where a customer relationship management system is extremely beneficial.

"When it comes to graduate outcomes, of course, we make sure that all our learning outcomes are met and assessed in a specific way," they add. "We also have a graduate survey in which they provide feedback about their experience."

43%

of academic leaders do not feel their institution is making good progress in improving graduate outcomes

> "[STUDENT SUCCESS] IS A CHALLENGING AREA TO IMPROVE, BECAUSE OF COMPLICATIONS LIKE A MISMATCH BETWEEN GRADUATE SKILLS AND JOBS, AND OTHER ECONOMIC FACTORS"

DESIGN NOTE FROM ED STUBBS, AUTOMOTIVE DESIGN EDUCATOR, FOUNDER SKETCH VR

The transmission system delivers appropriate power to the wheels from the engine

"Students often find moving from year to year as jarring as shifting gears in a manual car, with abrupt transitions that disrupt momentum. The *Futura* car's continuously variable transmission eliminates these shifts, maintaining peak efficiency and smoothly translating power to the road — just as an ideal education would ensure seamless progression for students."

BRAKE HORSEPOWER

ACADEMIC EXCELLENCE IN KNOWLEDGE CREATION AND RESEARCH OUTPUTS (BIBLIOMETRICS)

The creation of new knowledge, and its subsequent measurement through bibliometrics, is central to the mission of research institutions. Some 79% of respondents rated it as a priority, high priority or very high priority. And 64% recognized its high transformational potential.

Many top academics agree that a blended approach is essential for meaningful research assessment. Our Back to Earth report revealed that 66% of academic leaders believe academia has a moral responsibility to incorporate real-world impact into standard research evaluation. Increasingly, that involves some measure of societal or economic impact, or what difference the research has made in the local, national or international communities. Impact is itself a plurality of outcomes, from generating jobs and income to acting as a focus for community goals.

An Associate Vice Chancellor for Research at a university system in the US says that working with local groups is one way to frame social impact, which is otherwise difficult to measure. "Someone who's working on health equity, who's really transformed healthcare delivery in a certain area of the state, may not necessarily have published widely in scholarly journals," they said.

The growing community movement to evaluate academic research more holistically emphasizes shifting the focus from traditional bibliometrics and academic outcomes to assessing real-world impact, societal relevance, and practical contributions to address global challenges.

DESIGN NOTE

Brake horsepower (bhp) is a measure of the efficiency of a vehicle's powertrain

"A car with a high bhp is powerful — and a university that consistently produces high-achieving graduates and impactful research with minimal 'waste' demonstrates similar institutional efficiency, transferring its academic energy into meaningful outcomes for society."

14 objectives take precedence over bibliometrics, even though 64% recognize them as highly transformational – reflecting the complexity of balancing competing priorities (79% rated them a high priority).

CAR-TO-CAR NETWORKS

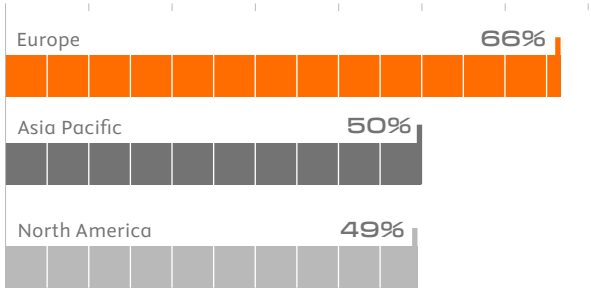
STRONG GLOBAL NETWORKS DEVELOPED

DESIGN NOTE

Car-to-car networks enable real-time information sharing between vehicles

"Sharing information about weather or road conditions with fellow drivers allows traffic to move better as a whole. Similarly, knowledge transfer between institutions builds resilience and optimizes performance."

REGIONAL VARIATION IN REPORTING GOOD PROGRESS AGAINST GLOBAL EDUCATION NETWORKS



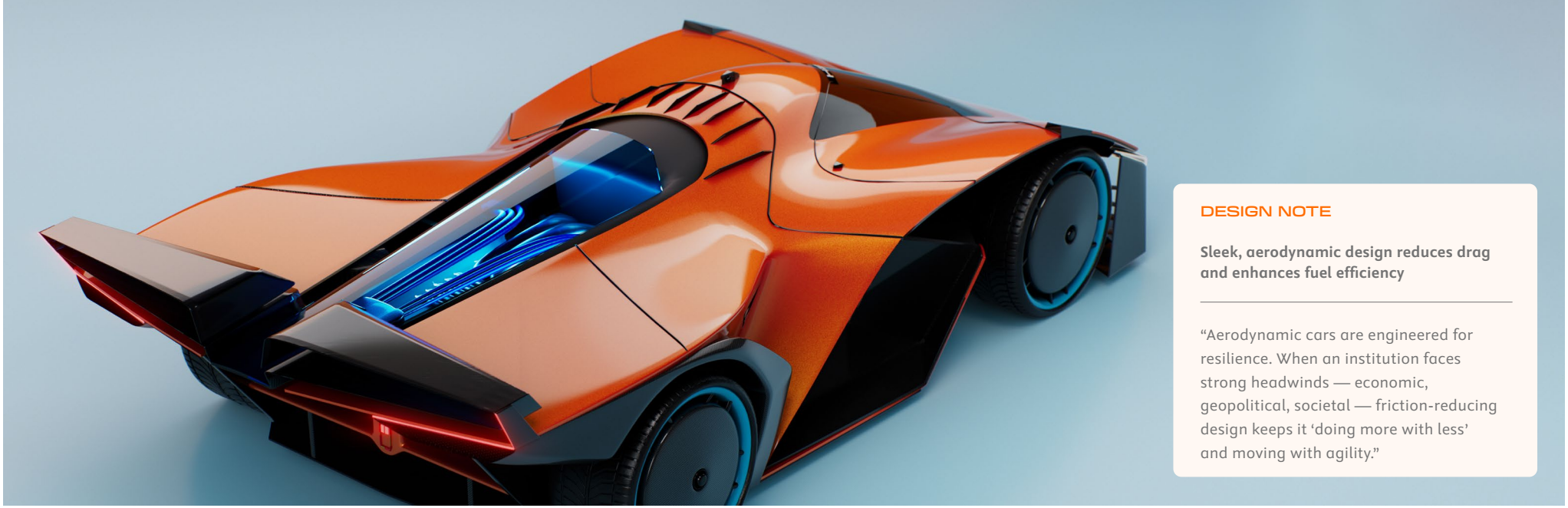
Building robust global networks — for education and research — is increasingly important in a more interconnected world, where institutions need to create strong partnerships and collaborate internationally. Such networks enable collaboration, joint projects, and student and researcher exchange programs, as well as international campuses.

"We have a multicultural campus and a system of whole-person education underpinned by faculties and residential colleges in an international education setup. It is one of our unique advantages," says a Vice Rector of Research at an Asia Pacific university.

The survey revealed geographical differences in how well institutions are connecting and collaborating. Asked about the development of education networks, 66% of academic leaders in Europe reported good progress. But only 50% could say the same in the Asia Pacific region, and 49% in North America.

Such networks can help transform the performance of universities because they offer a reliable source of students and income, says a former Head of International Recruitment at a university in the UK. "If you have strong partnerships and look after those, you know that you're going to get a steady stream of good-quality students," they say. "That's more sustainable than having to go out each year to try and get new leads."

Internationalization also helps research performance, with institutions able to access more funding, increase impact and attract research talent. Forging such networks is important even for institutions in countries who are already world leaders. For example, 93% of university leaders in the US considered global research networks a high priority, compared with 84% of non-US universities.



DESIGN NOTE

Sleek, aerodynamic design reduces drag and enhances fuel efficiency

"Aerodynamic cars are engineered for resilience. When an institution faces strong headwinds — economic, geopolitical, societal — friction-reducing design keeps it 'doing more with less' and moving with agility."

AERODYNAMIC DESIGN

HIGH SUSTAINABILITY PERFORMANCE

Sustainability is a central agenda item for institutions worldwide. A massive 96% of academic leaders in Europe consider high sustainability performance to be a top priority, compared with 90% and 73% in North America and Asia Pacific, respectively.

What does high sustainability performance mean? The survey asked about initiatives such as water and energy conservation, and how aspects of curricula, research and operations might align with the UN Sustainable Development Goals.

85% of global respondents say good sustainability performance (systematically implementing and evaluating sustainability measures across university operations, curriculum, and research) is a high priority. 82% say sustainable development (advancing sustainability through targeted research, publications, initiatives, and strategic global ranking participation) is a high priority.

And almost all — 96% — of UK-based respondents say both are high priority.

A university's environmental sustainability has long mattered to academic leaders. But addressing sustainability as a strategic goal, such as by building a strong climate research group or having a reputation for political campaigning, can also be transformative. That's because it's seen as a way for institutions to distinguish themselves and stand out from competitors.

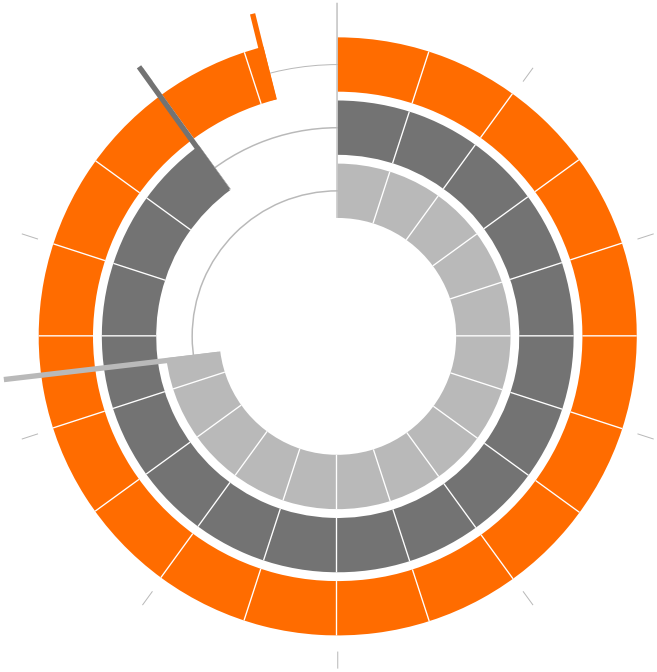
"University rankings focused on impact shine a spotlight on their comparative performance related to SDGs, which they then use as a mechanism to compete," says Nick Fowler, Chief Academic Officer at Elsevier. "For example, a university that ranks number one in Climate Action globally puts it on the map and tells others what they are doing with respect to that SDG. It helps them build networks and it helps them attract faculty."

GLOBAL ACADEMIC LEADERS CONSIDER HIGH SUSTAINABILITY PERFORMANCE A TOP PRIORITY

96%
Europe

90%
North America

73%
Asia Pacific



ACTIVE AERODYNAMICS:

EFFECTIVE DIGITAL TRANSFORMATION

Institutions are heavily focused on leveraging technology to transform their operations.

Key objectives related to this focus area include effective digital transformation, high digital service adoption rate, effective AI integration and effective and responsible integration and adoption of generative AI.

The survey reflects a consensus among many academic leaders that effective digital transformation has high transformational potential for their institution. Some 69% in Europe agree with the statement, our survey shows, with the figure even higher in North America at 76%.

Asia Pacific is less confident: just 50% of leaders there share the same level of optimism. That could be related to a different survey finding: three in five academic leaders there do not think their institution has made good progress towards effective digital transformation.

This cautious outlook highlights a critical factor: the human element in how digital tools, including AI, are embraced and applied.

"It's not just about the people who are developing AI tools, it's actually the people using these tools, and how they use them, that makes a difference", says a Director of Institutional Research at an Asia Pacific university. "That's our underlying vision – nurturing our students, as much as we can, to use AI responsibly and for good."

The survey shows 87% of academic leaders view a high digital service adoption rate as a high priority, while 84% view effective digital transformation as a high priority.

The Director of Academic IT & Software at a university in the Middle East says tremendous change potential could be unlocked from digital technology by finding ways to consolidate and unify existing systems. "We're a very old university, so we have almost everything digitized. But this creates another problem because it's not digitized in one place," they say. "I would invest in a one-stop-shop, a single facade that brings everything together and brings clarity to my students."

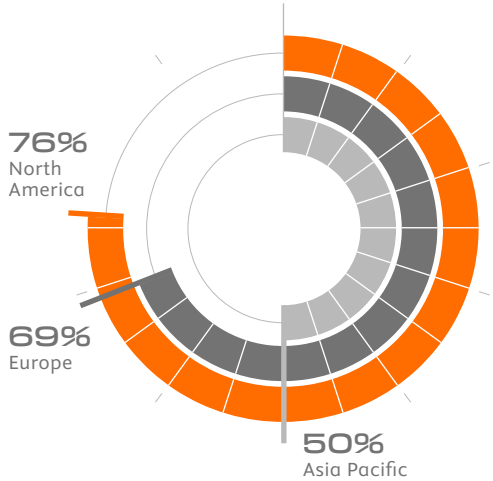
There are other opportunities, too. But uncertainty about generative AI's long-term impact on academia (particularly in education), as well as ethical, integrity and accuracy concerns may be slowing its adoption in higher education.

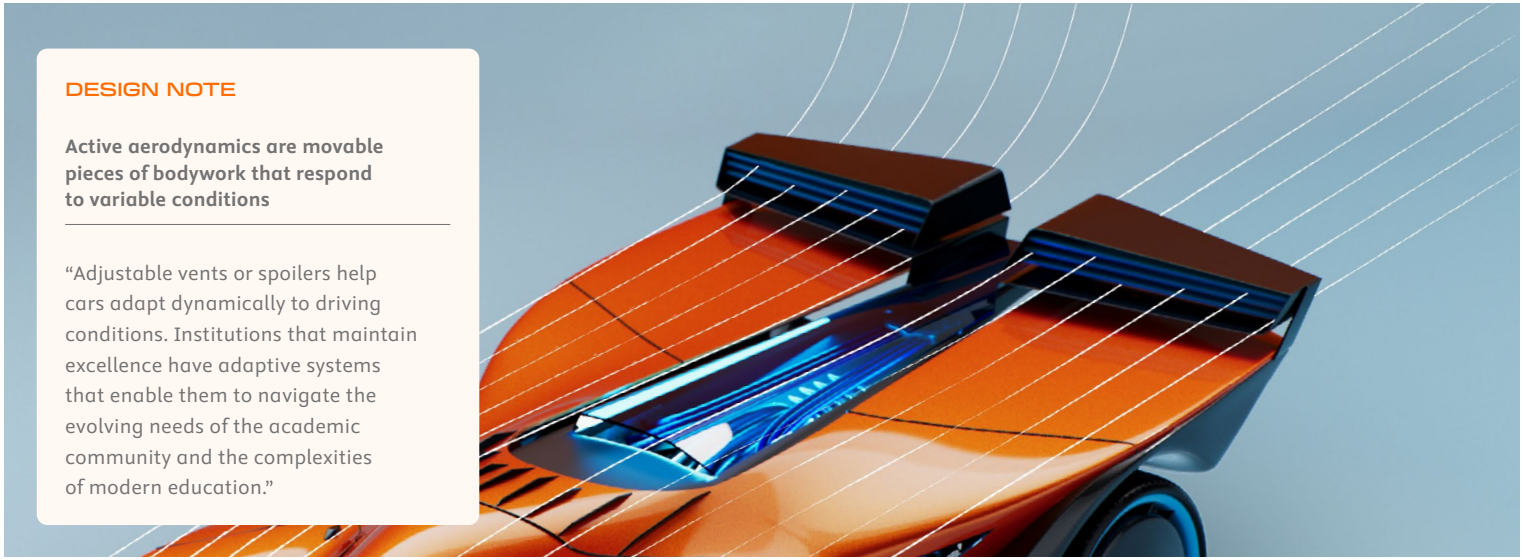
The survey suggests that academic leaders recognize the ability of AI to supplement more traditional human tasks. It can automate administrative tasks (e.g. enrollment, grading, scheduling), accelerate research through data analysis and literature reviews, and optimize operations. That frees up resources, reduces costs and improves efficiency across non-educational functions, allowing institutions to focus on innovation and strategic growth.

However, only 34% of leaders believe they have made good progress on effective and responsible integration and adoption of generative AI and only 44% see high transformational potential in it, with just 66% seeing it as a high priority.

That's partly explained, says a former Provost at a US university, because the topic is so new. "It's not just academia that's struggling to get to grips with AI — everybody is. Academia is actually moving faster than many other institutions," they say.

TRANSFORMATIONAL POTENTIAL ASCRIBED TO EFFECTIVE DIGITAL TRANSFORMATION VARIES BY REGION





DESIGN NOTE

Active aerodynamics are movable pieces of bodywork that respond to variable conditions

"Adjustable vents or spoilers help cars adapt dynamically to driving conditions. Institutions that maintain excellence have adaptive systems that enable them to navigate the evolving needs of the academic community and the complexities of modern education."

LOCATION, LOCATION, LOCATION
ACADEMIC LEADERS' ATTITUDES TOWARD AI AND GENAI SHOW REGIONAL VARIATION

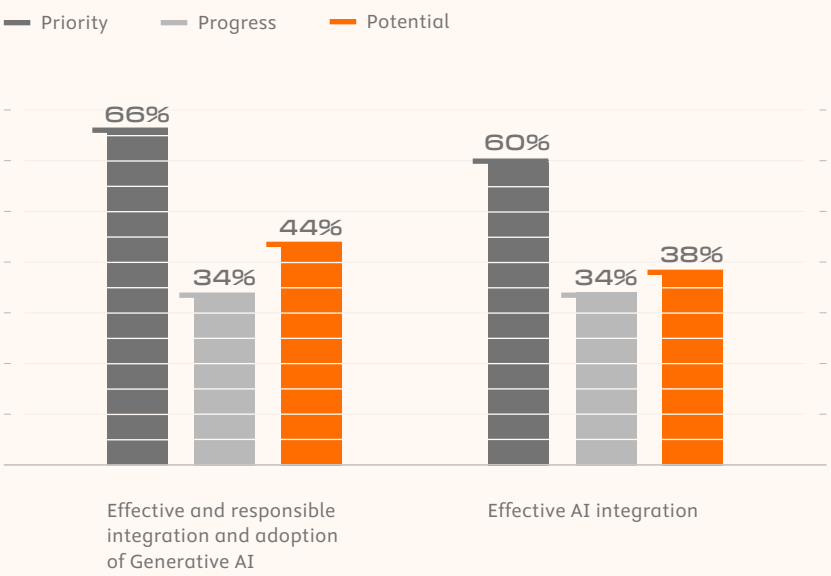
Uneasiness about AI's long-term impact, and ethical and integrity concerns may be slowing adoption in higher education — yet this varies by region.

Globally, over one third (34%) of academic leaders surveyed felt they had not yet made tangible progress towards the effective integration of AI, nor towards the effective and responsible integration and adoption of generative AI. However, 38% and 44% of respondents see high transformational potential in both objectives, with 60% and 66% prioritizing them highly, respectively.

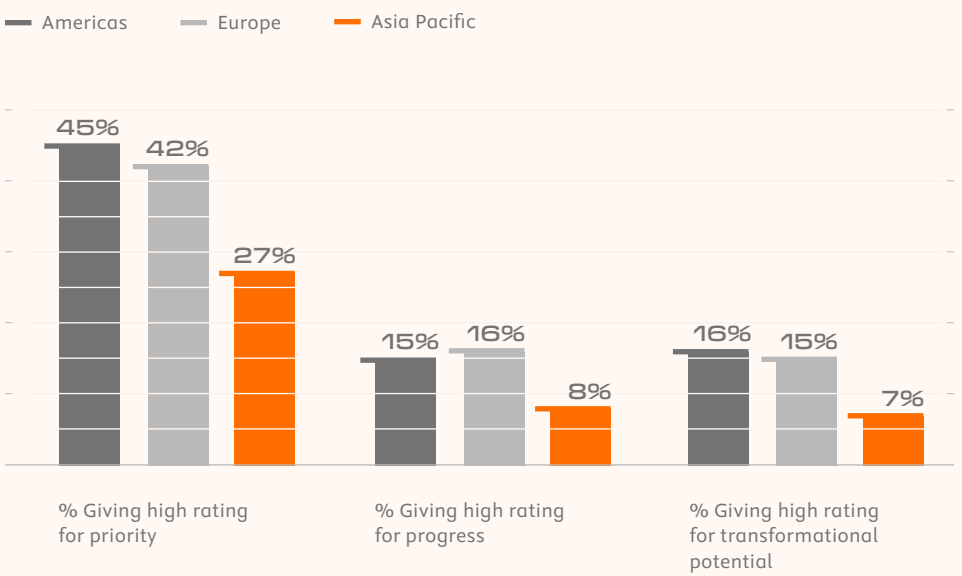
This suggests that academic leaders are well aware of the importance of AI, with the comparatively low progress a reflection of the technology's maturity, availability of training and timelines required to integrate responsibly.

Regionally, the Americas and Europe place far greater priority and see far greater transformational potential in the effective and responsible integration and adoption of GenAI. For academic leaders in Asia Pacific, it is a noticeably less critical issue — in India, it is the objective with both the least progress made and least transformational potential ascribed. In China, out of 25 objectives, both AI-related objectives are prioritized the lowest overall.

TWO THIRDS OF ACADEMIC LEADERS HIGHLY PRIORITIZE GENAI AND AI



FOR ACADEMIC LEADERS IN ASIA PACIFIC, GENAI IS VIEWED AS LESS CRITICAL



ACADEMIA FUTURA IN NUMBERS

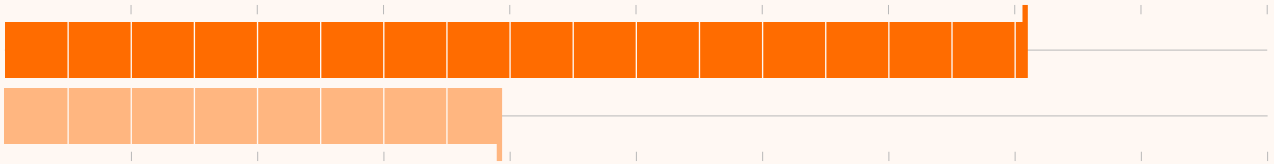
Academic leaders surveyed identified five objectives as holding the greatest opportunity for performance gains. From diversifying revenue sources to increasing cross-border collaboration — explore the areas in which institutions believe they should focus to progress, and 'upgrade' from *Presente* to *Futura*.

FUEL SOURCE

EFFECTIVE REVENUE DIVERSITY

High priority

81%



39%

Good progress

The move from a hybrid system dependent on fossil fuels and conventional battery technology to a split between hydrogen, biofuels and electric power analogizes the need for universities to shift to a diverse and sustainable funding model. Maximizing revenue and minimizing risk relies on diverse funds from grants, partnerships, donations and endowments.

PAINT JOB

EFFECTIVE INTERNAL & EXTERNAL MARKETING OPERATIONS

29% think their institution is making good progress, despite **64% identifying it as a priority**

Design choices, for example, the striking color of the bodywork, communicate an identity and vision. Similarly, effective marketing creates a cohesive and appealing narrative for institutions, communicating strengths, values and achievements to help build reputation.

C2C ANTENNAS

OUTSTANDING CROSS-SECTOR PARTNERSHIPS

39% think their institution is making good progress, despite **1 in 2 recognizing its transformational potential**

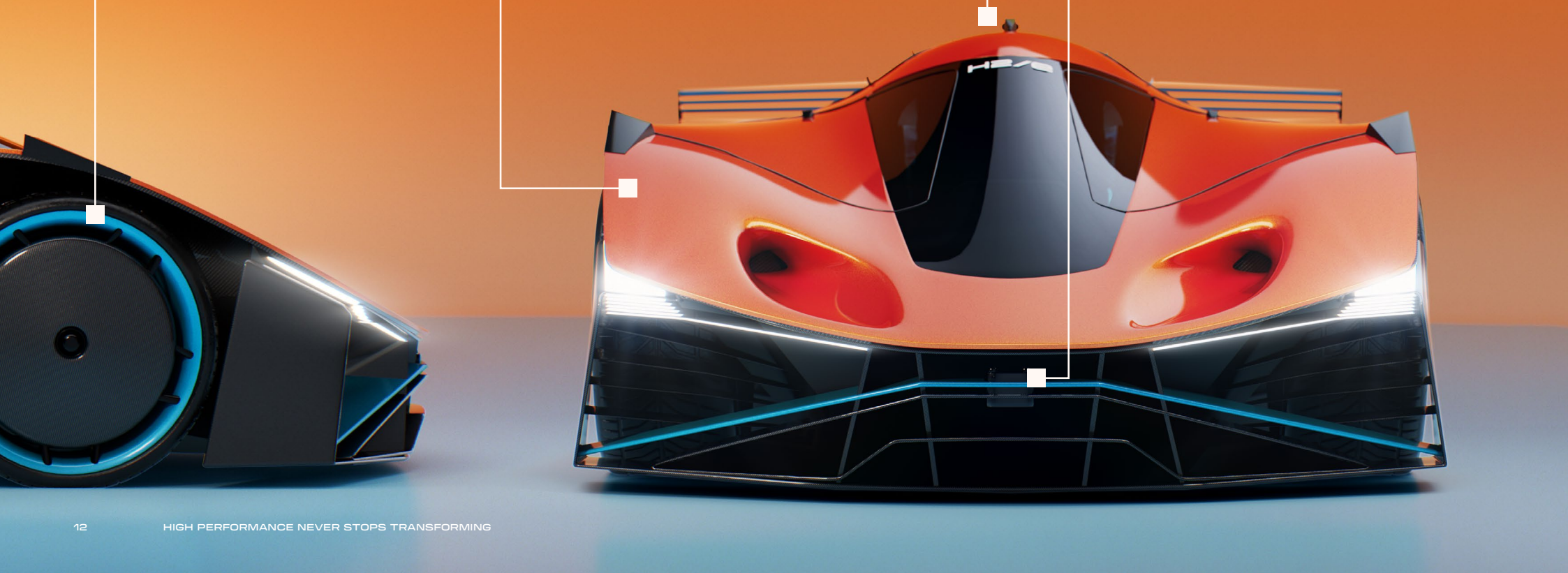
Antennas that share real-time data to a car-to-car network are analogous to the knowledge exchange behind transformational cross-sector partnerships. This type of collaboration enables institutions to pool insights, optimize research outcomes, broaden educational impact and solve complex challenges.

AI CONTROL SENSORS

EFFECTIVE AI INTEGRATION & RESPONSIBLE INTEGRATION AND ADOPTION OF GENAI

34% think their institution is making good progress in either

Integration of control sensors around the vehicle creates positive data feedback loops that optimize performance, similar to the transformational potential of AI and GenAI in academic institutions. As smart vehicles combine inputs for safe and efficient navigation, AI must be carefully implemented within institutions.



VISION OF THE FUTURE

Nick Fowler
Chief Academic Officer
Elsevier

Many in academia currently feel under pressure. Their missions are under scrutiny by governments and by the public. External factors, such as national policies on immigration, are reducing their ability to recruit foreign students and constraining their incomes.

These are tough times. However, universities have historically been adept at finding ways to adapt and progress. Current challenges create an imperative for them to continue evolving.

The concept of Fourth Generation Universities provides one vision for how universities can change and evolve in response to these external pressures. The term first appears in a paper by K. Palowski titled The 'Fourth Generation University' as a Creator of the Local and Regional Development (2009).

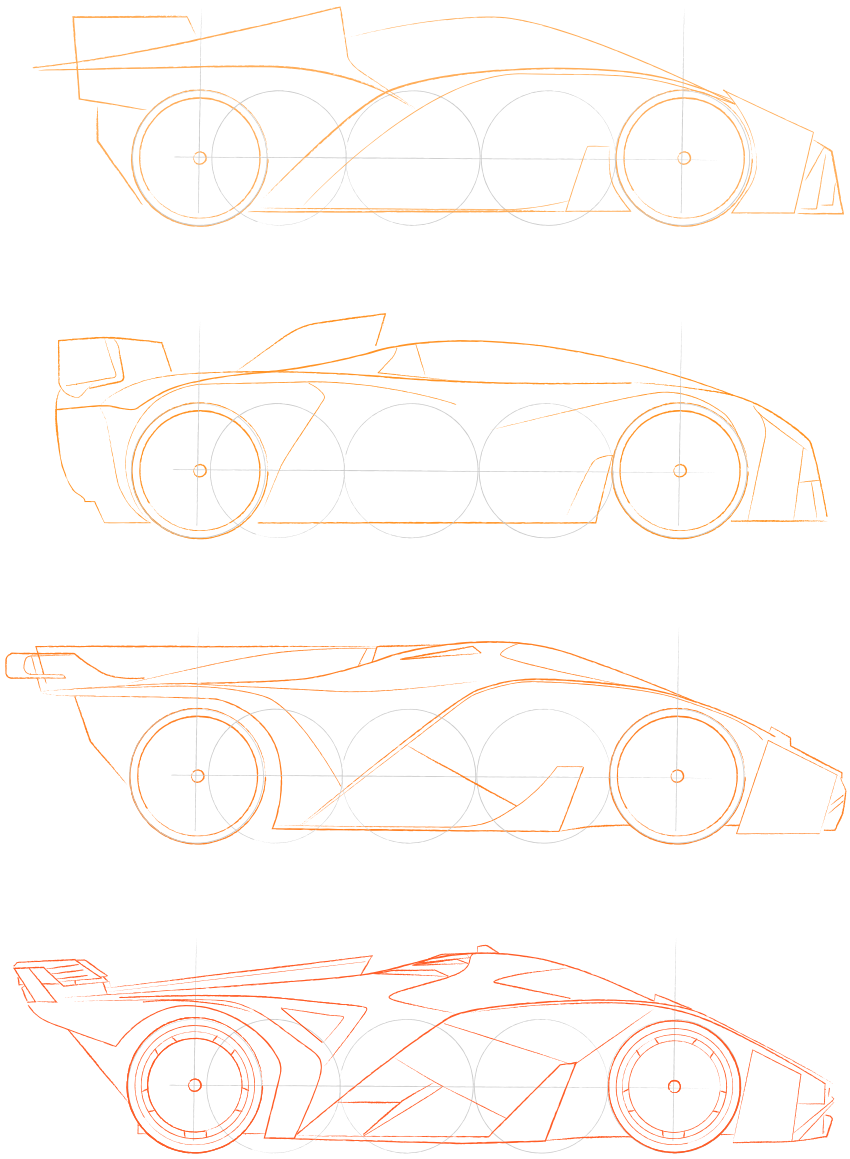
A Fourth Generation University is characterized by an integrated approach to education, research and innovation, with a strong focus on societal impact and regional development. These universities are actively engaged in co-creation processes with a variety of stakeholders, aiming to drive economic growth and address global and local challenges through knowledge and innovation. Institutions embracing this identity embody adaptability and entrepreneurship, extending their influence beyond academia into economic and social spheres. This evolution reflects a shift towards a more active, engaged and collaborative role for universities in society, underpinned by partnerships that bridge the gap between research and practice, fostering innovation ecosystems that contribute to regional and global competitiveness.

Fourth Generation Universities are focused on educating students in strategically important disciplines. They help graduates get jobs, often locally; they help found startup companies that employ other people; and they solve local challenges.

This concept enables institutions to position themselves as forces for good that align with national growth agendas. By giving universities a common framework, vocabulary and set of indicators, they are better able to assess progress and demonstrate their contributions to governments and the public. We invite you to read more about Fourth Generation University program or contact us at 4GU@elsevier.com.

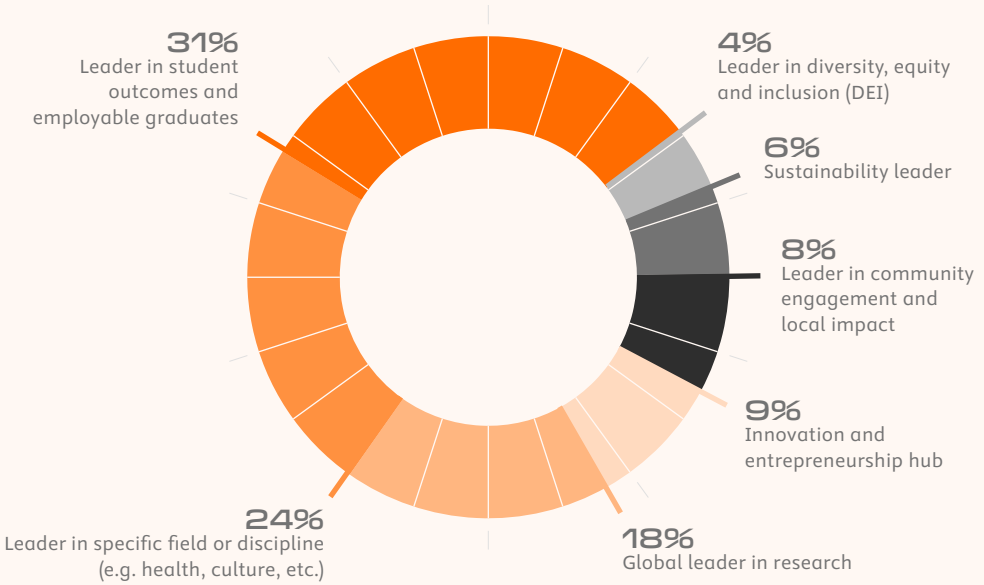
Fourth Generation Universities offer one vision for academia. However, it may not resonate for all institutions. For example, some are focused on educating as many students as possible remotely and may not have research functions. Conversely, others may have a research focus in niche areas and do little teaching. However, regardless of an institution's transformation goals, there is growing consensus that the foundations for a successful future should be set today. Academic leaders are

"THESE ARE TOUGH TIMES. HOWEVER, UNIVERSITIES HAVE HISTORICALLY BEEN ADEPT AT FINDING WAYS TO ADAPT AND PROGRESS. CURRENT CHALLENGES CREATE AN IMPERATIVE FOR THEM TO CONTINUE EVOLVING."



Academia Futura taking shape — line by line

ACADEMIC LEADERS' DESIRED FUTURE STATE



putting increasing emphasis on creating globally connected, digitally enabled institutions capable of truly sustainable performance.

Despite political realignments changing the landscape for international collaboration, universities continue to recognize the power of global partnerships and the exchange of ideas, data and talent. This network approach extends beyond traditional collaboration on research to how institutions can become even higher performing. They share best practice on how to engage the public and exchange advice on developing governance models to work with government and industry, all of which help build resilience.

Digital transformation has been a looming presence on the horizon for many, with the scale of change a daunting prospect. However, this is now a concept that academic leaders have embraced, not only seeing its potential impact on productivity and collaboration, but how it can be used for competitive advantage. The prospect of using advanced data analytics to give insights and benchmarks on key dimensions like faculty partnerships with industry is valuable to academic leaders.

These two elements — global partnerships and digital transformation — are fundamental to the creation of sustainable institutions. However, academic leaders are also focusing on the most direct drivers of sustainability: financial security and socio-environmental impact. Developing explicit strategies to establish sustainable practices that appreciate this duality are underpinning how universities are evolving in the face of current and future challenges.

THE TRANSFORMATION ROADMAP

How can academic leaders drive transformation across their institutions? This plan organizes selected high-priority objectives into five dimensions that underpin institutional performance. These areas of institutional focus set out what academic leaders can do in each and specify the digital and data infrastructure they must build on to progress.

STRATEGY

Broad research outcomes and real-world impact are a key priority for 78% of academic leaders, the survey showed. As their social contract comes under scrutiny, institutions need to look at ways that they can demonstrate the contribution they're making beyond academia. To address this, institutions should take a more holistic approach to assessing research performance, overlaying bibliometrics with indicators of societal impact, including media mentions, exhibitions, software created, jobs created through spin-off companies, and citations in patents and policy documents.

"Our research strategy goes beyond traditional academic metrics. It's not just about faculty scholarship leading to patents or publications, but about creating meaningful, translatable impact that directly prepares students for real-world challenges and workforce dynamics," says the Associate Vice Chancellor at a US university system..

FUNDING OPPORTUNITIES

A critical pillar for institutional success, 82% of leaders said diverse and sustainable research funding was a high priority goal. That directs those in academia to monitor key indicators, including the volume and value of grant applications, proposals and successful awards. They need to keep an eye on the grant success rate and the number and value of large, team-based interdisciplinary projects, as well as income volume. This will help researchers identify the funding opportunities that have the highest chances of being awarded. And academic leaders must assess funding diversity, as indicated by the volume and value that involve international, industry and cross-sector co-applications.

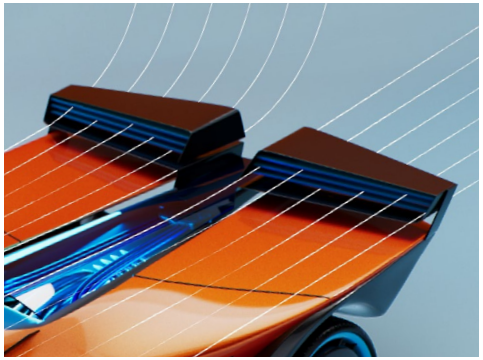
"Grants are very unreliable for a lot of people. Philanthropy is very unreliable. The only really reliable source is endowment," says a Vice Director at a European university. "Everybody loves endowment because endowment is what builds legacy, future and stability."

COLLABORATION OPPORTUNITIES

The need for a developed and strong global education network was identified as a high priority by 87% of survey respondents. Institutions need a strategy in place to increase these international opportunities, and to promote them to researchers and students. This strategy can be based on indicators, including the number of programs delivered with international partners. Also important are the number of international campuses and the number of international student and researcher exchange programs.

"It is more important than ever for each US higher education institution to have a foreign policy — plus one in Washington — aimed at keeping academic doors open," writes Allan Goodman, CEO of the Institute of International Education. "Doing so will provide international classmates for our own students who do not study abroad to learn and develop friendships so essential for future work in a globalized world."

OPERATIONS



Academic leaders were 87% agreed that a high digital service adoption rate was a key priority. That makes sense given it's an essential way to streamline workflows and reduce operational burden. To get the most from this approach, institutions might consider developing specific plans on how to use technology to support student services. They can widen access using online or hybrid courses. And, they can find ways to incorporate the promise of AI while ensuring that these innovations don't overwhelm staff.

"AI for science has the potential to accelerate the pace of innovation like never before," writes a Vice President for Research at a university in the US. "New AI algorithms and models will bring unparalleled capabilities to assist scientists with analyzing huge and complex datasets and identifying patterns that guide their decisions and experimental designs."

REPUTATION

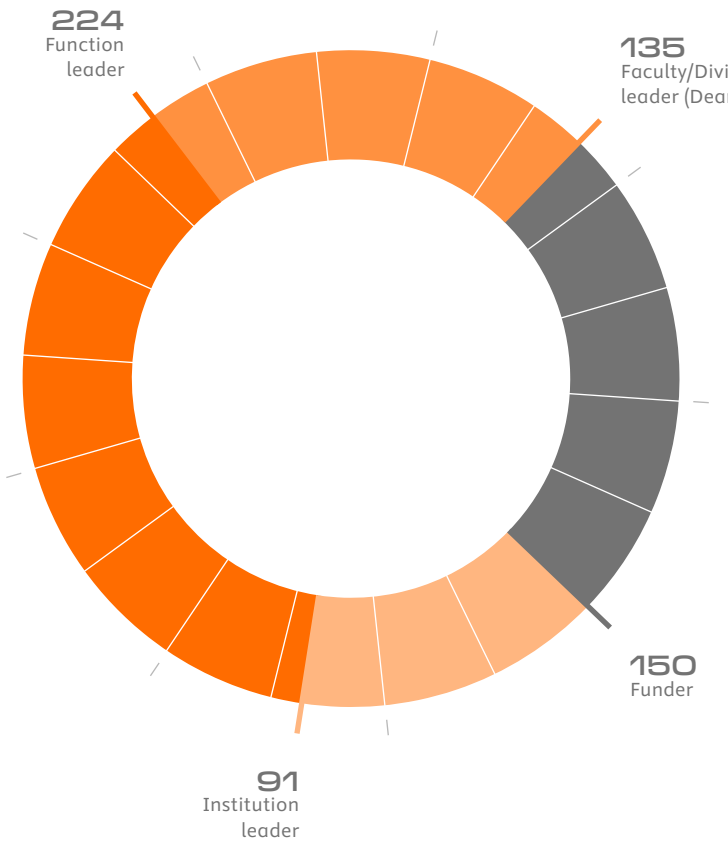
Some 85% of the academic leaders believe that building a reputation for excellent graduate outcomes is a key priority. To get there, they need to track and communicate indicators such as graduate earnings and graduate employment rates. They should gather information on the destination of those who move on from their institution by sector and type of employment. Other data that can help build reputation includes success in prestigious regional, national and international competitions, as well as feedback on alumni engagement and satisfaction.

Engaging alumni in 'expert activism' post-graduation might be one way to achieve this: "If colleges organize programs to solve pressing global problems, those who participate are likely to be thankful to their universities for their leadership and proud of the results," says Michael Madison, Professor at the University of Pittsburgh and Martin Sklandany, Professor at Pennsylvania State University, in the US.

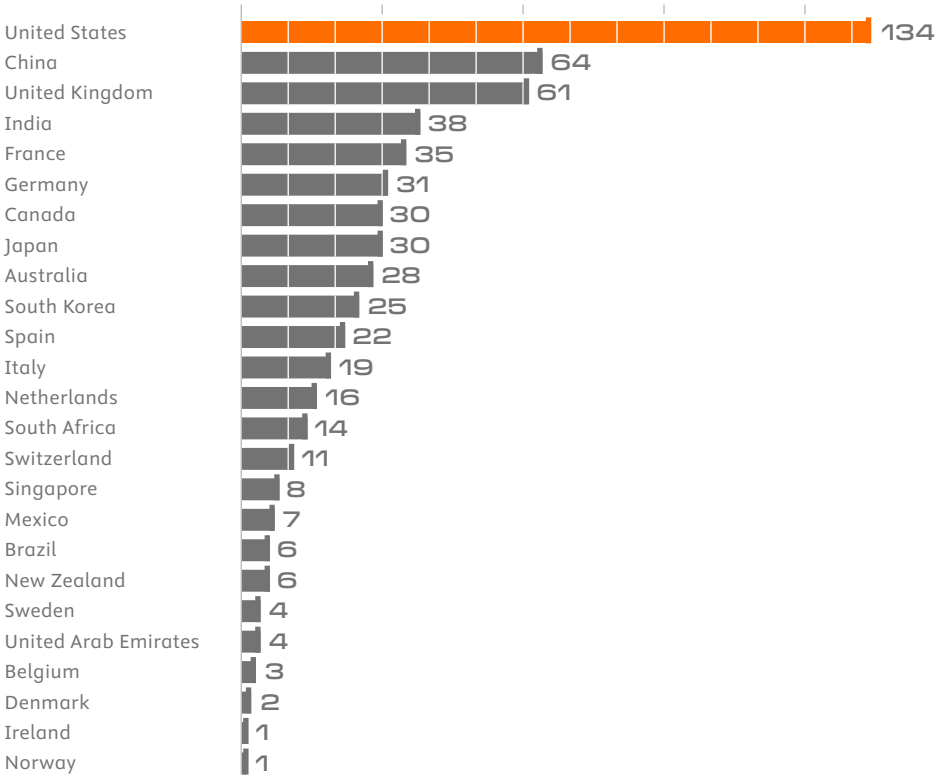
METHODOLOGY

This section details the demographic information of the 450 academic leaders and 150 funders across 20 countries who participated in the High Performance Index survey.

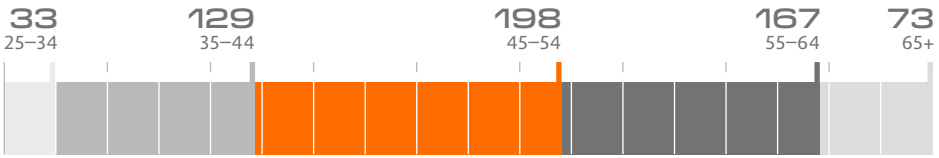
JOB ROLE



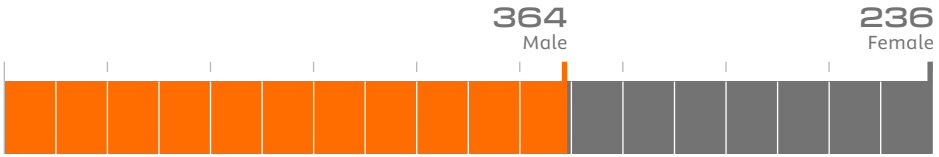
COUNTRY



DISTRIBUTION OF RESPONDENTS PER AGE GROUP



GENDER



INDEX: HIGH PERFORMANCE OBJECTIVES

STRATEGY

FINANCIAL HEALTH
Effective Revenue Diversity

Maintain optimal levels of revenue diversity by monitoring, e.g.:

- *Number of sources of overall revenue*
- *Percentage per revenue source*
- *Number of sources of research funding*
- *Percentage per research funding source*
- *Number of different modes of education delivery (e.g. UG, PG, online)*
- *Ratio of income/revenue per education delivery mode*

RESEARCH PERFORMANCE
Academic Excellence in Knowledge Creation and Research Outputs (Bibliometrics)

Drive research success and knowledge creation by monitoring traditional bibliometrics such as:

- *Number of publications and trends*
- *h-index, g-index, m-index*
- *Citations (including field-weighted and percentiles)*
- *Outputs related to e.g. the UN SDGs, Grand Challenges or government key technology areas*
- *Number of performances and attendance*

RESEARCH OUTCOMES AND IMPACT
Delivery of Broad Research Outcomes and Real-World Impact

Deliver real-world impact through outcomes and impact such as:

- *Number of industry standards/clinical guidelines*
- *Number of exhibitions*
- *Software/open-coding created*
- *Citations in patents*
- *Citations in policy documents*
- *Citations in media*
- *Jobs created from spin-offs etc.*
- *Number of prestigious exhibitions or performances at prestigious venues*
- *Outcomes and impact related to e.g. the UN SDGs, Grand Challenges or governments key technology areas*

STUDENT SUCCESS
Excellent Student Retention, Engagement and Graduation Rate

Ensure excellent student retention and completion rates by evaluating:

- *Retention rate across all programs and modes (e.g. UG, PG, online)*
- *Graduation rate across all programs and modes (e.g. UG, PG, online)*
- *Time to completion of award*
- *Class engagement rates*

DIVERSITY, EQUITY & INCLUSION (DEI)
A Diverse Student Body

Ensure a diverse, equitable and inclusive student body by monitoring the demographic diversity of students across e.g. race, ethnicity, gender, socio-economic background.

DIVERSITY, EQUITY & INCLUSION (DEI)
A Diverse Faculty and Staff

Ensure a diverse, equitable and inclusive faculty and staff by monitoring the demographic diversity of faculty and staff, across e.g. race, ethnicity, gender.

DIVERSITY, EQUITY & INCLUSION (DEI)
Diversity in Leadership Positions

Ensure a diverse, equitable and inclusive leadership team by monitoring the demographic diversity of the university leadership across e.g. race, ethnicity, gender.

GENERATIVE AI
Effective and Responsible Integration and Adoption of Generative AI

Ensure effective integration and adoption of generative AI across the institution through an evaluation structure, such as a committee, and processes to oversee strategy and responsible adoption.

INDEX: HIGH PERFORMANCE OBJECTIVES CONTINUED

FUNDING

RESEARCH FUNDING
Diverse and Sustainable Research Funding

Achieve and maintain sustainable research funding through monitoring indicators such as:

- *Applications/proposals volume and value*
- *Awards volume and value*
- *Grant success rate*
- *Number and value of large, team-based interdisciplinary projects*
- *Income volume*
- *Funding diversity (volume and value involving international/industry/cross-sector co-applications)*

ENTERPRISE, INNOVATION AND KNOWLEDGE EXCHANGE
Optimal Income from Innovation and Commercialization

Maximize innovation pathways and commercialization by monitoring indicators such as:

- *IP volume and income (patents, designs, trademarks, licenses)*
- *Sustainable spin-offs and related finances*
- *Contract research volume*
- *Business consultancy volume and value*
- *Cross-sector collaboration rate*
- *Patent co-applications with industry*
- *Inflow of venture capital to support innovation*

COLLABORATION AND PARTNERSHIPS

ACADEMIC COLLABORATION/ PARTNERSHIPS
Developed and Strong Global Research Network

Strengthen and leverage global research expertise and opportunities by monitoring indicators such as:

- *International collaboration rates*
- *Number of international co-authors/co-publications*
- *Number of funding applications with international co-applicants*
- *Patent co-applications with international co-applicants*

ACADEMIC COLLABORATION/ PARTNERSHIPS
Developed and Strong Global Education Network

Strengthen and leverage global expertise in education to develop and deliver excellent programs by monitoring indicators such as:

- *Number of programs delivered with international partners*
- *Number of international student and researcher exchange programs*
- *Number of international campuses*

CROSS-SECTOR COLLABORATION/ PARTNERSHIPS
Outstanding Cross-sector Partnerships

Strengthen and leverage cross-sector (e.g. industry, government) expertise in research and education to develop and deliver excellent programs by monitoring indicators such as:

- *Number of programs or internships delivered with cross-sector partners*
- *Number of cross-sector co-authors*
- *Number of joint funding applications and awards with cross-sector partners*
- *Number of publications with cross-sector authors*
- *Patent co-applications with cross-sector partners*

INTERDISCIPLINARY COLLABORATION/ PARTNERSHIPS
A Broad Interdisciplinary Integration Rate

Build capacity and capability in interdisciplinary research and education by monitoring indicators such as:

- *Number of multi-disciplinary and joint degree programs*
- *Number and share of highly interdisciplinary publications*
- *Disciplinary differences in publication authors*
- *Disciplinary differences in references*
- *Number of inter-disciplinary funding applications and awards*

INDEX: HIGH PERFORMANCE OBJECTIVES CONTINUED

OPERATIONS

SUSTAINABILITY
High Sustainability Performance

Build a sustainable institution by delivering and evaluating the success of initiatives such as:

- *Water conservation measures*
- *Energy conservation measures*
- *Number of sustainability initiatives implemented*
- *Comprehensive reviews of university curriculum, research and operations through the lens of, for example, the UN SDGs*
- *Research and physical plant operations*

OPERATIONAL EFFICIENCY
Effective Resource Utilization and Optimization

Accurate and comprehensive measurement and monitoring of resource utilization and optimization through:

- *Number of new workflow systems, services and process improvements implemented*
- *Efficiency gains and reduction in administrative burden*
- *Usage of key infrastructure and buildings*

DIGITAL TRANSFORMATION
Effective Digital Transformation

Operational efficiency and effectiveness through delivery of digital transformation initiatives including, e.g.:

- *Number of new digital technologies such as workflow solutions implemented*
- *Integration of new digital technologies across institution functions such as operations, teaching, research and administration*

DIGITAL TRANSFORMATION
Effective AI integration

Effective implementation of integration strategy for AI, including Generative AI:

- *Availability and participation rates in training programs designed to equip staff and faculty with the skills and knowledge needed for effective AI integration*
- *Adherence to ethical guidelines, regulations and frameworks that govern the use of AI*
- *Operational impact (speed of decision making or to identify promising research areas)*

DIGITAL TRANSFORMATION
High Digital Service Adoption Rate

Optimized digital service adoption through monitoring:

- *Usage of existing digital services by staff and students*
- *Usage of new digital services by staff and students*
- *A committee and processes to oversee strategy and responsible adoption*

INDEX: HIGH PERFORMANCE OBJECTIVES CONTINUED

REPUTATION

ACADEMIC EXCELLENCE AND REAL-WORLD IMPACT

High Community Awareness of Academic Excellence and Broader Impact on Society

Active marketing and communication of academic excellence and real-world impact to build reputation and help attract and retain the best talent and students, including around:

- *Clinical trials and guidelines completed*
- *Influence and participation in local, national and internationals policy making*
- *Participation and visibility of academic achievements and excellence in local, national and international media*
- *Academic excellence related to e.g. the UN SDGs, Grand Challenges or government key technology areas*
- *Number and value of technology innovations and commercialization activities*
- *Invitations to participate at prestigious performing arts exhibitions*

GLOBAL STANDING

High Performance in International Rankings

Manage global organizational reputation through strategies to improve performance in major university rankings such as THE, QS and US News and World Report Rankings.

MARKETING OPERATIONS

Effective Internal and External Marketing Operations

An effective marketing operation that drives brand impact, including managing reputation, shaping positive perceptions and enhancing awareness through initiatives such as:

- *Measurement frameworks for marketing success (e.g. external brand perception score, student enrollment target achievement, social media engagement rate)*
- *Marketing campaign ROI (Return on Investment) analysis*
- *Marketing automation success/usage rate*
- *Increase crisis communications response time*

SUSTAINABILITY

Sustainable Development

Build a reputation for sustainable development through indicators such as:

- *Number and share of publications aligned to e.g. the UN SDGs, Grand Challenges or key government technology areas*
- *Participation and rankings in sustainability rankings such as THE Impact Rankings*
- *Number of sustainability initiatives delivered across university*

STUDENT SUCCESS

Excellent Graduate Outcomes

Build a reputation for excellent graduate outcomes by tracking and communicating indicators such as:

- *Graduate earnings*
- *Graduate employment rate*
- *Destination of leavers per sector/type of employment*
- *Student satisfaction*
- *Success in prestigious regional/national/ international student competitions*
- *Alumni engagement and satisfaction*

COMMUNITY ENGAGEMENT

Meaningful Community Impact

Ensure local impact through monitoring and evaluating areas such as:

- *Impact on local communities such as improved health outcomes or influencing local politics*
- *Platform/websites created for knowledge dissemination or science communication*
- *Number of local exhibitions*
- *Citations and mentions in local and national media*
- *Number of partnership with local organizations*

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