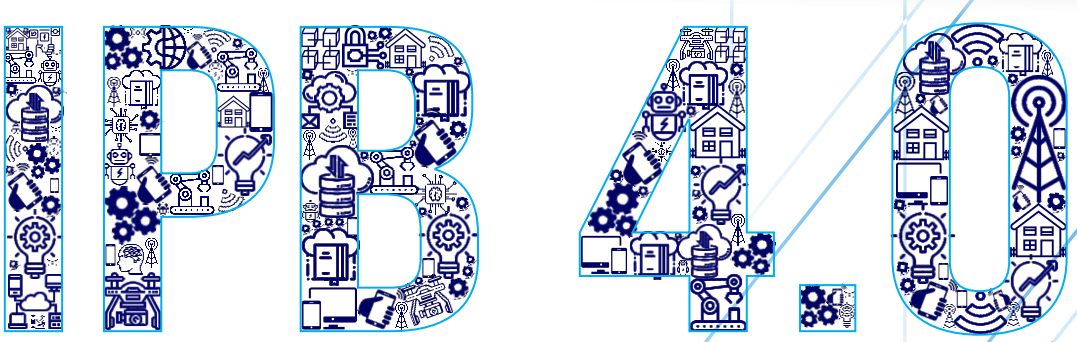
STRATEGIC PLAN

IPB UNIVERSITY 2019-2023

THE IPB UNIVERSITY STRATEGIC PLAN 2019-2023



Race in Excellence to Shape IPB Future

www.ipb.ac.id

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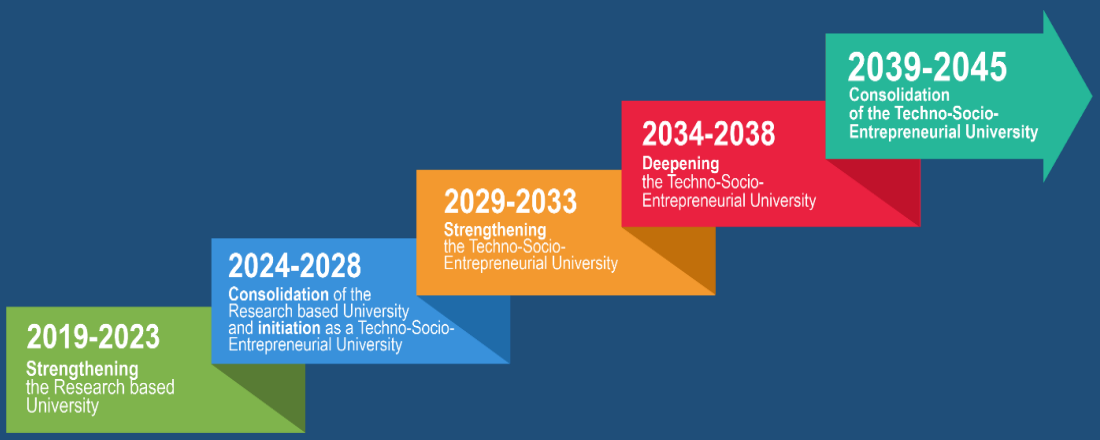
Background

In the IPB Long-term Plan, the period from 2019-2023 is designated as the **Strengthening the Research-Based University** phase. The focus of IPB development in this period will be strengthening as a research-based university through the strengthening of our research culture, increasing research performance and relevance to create innovation that enhance IPB's reputation, commercializing the innovations and related businesses with strong support from a research management system, the education and research facilities and infrastructure, funding, management information system, incentives system for publication, and innovation and intellectual property rights management. A number of programs and activities need to be designed in order to achieve the performance indicators of this phase.

IPB's role and contribution will develop and increase as long as IPB is able to position itself appropriately within the dynamic developments of the modern era. The Industrial Revolution 4.0 era is a challenge and opportunity that can be optimized to strengthen IPB's role and position on the national, regional, and global stage. It is hoped that IPB's target to attain ranking in the **Top 500 QS World University Ranking**, **Top 100 Asia**, and To**p 3 Indonesia universities** will be achieved in this next five year period. Achieving this will require arranging programs and activities systematically, that are measurable and directed towards achieving the IPB 2019-2023 agenda. The 2019-2023 IPB Strategic Plan is an extremely important document and needed as a guide for IPB to design programs and activities for the next 5 years.

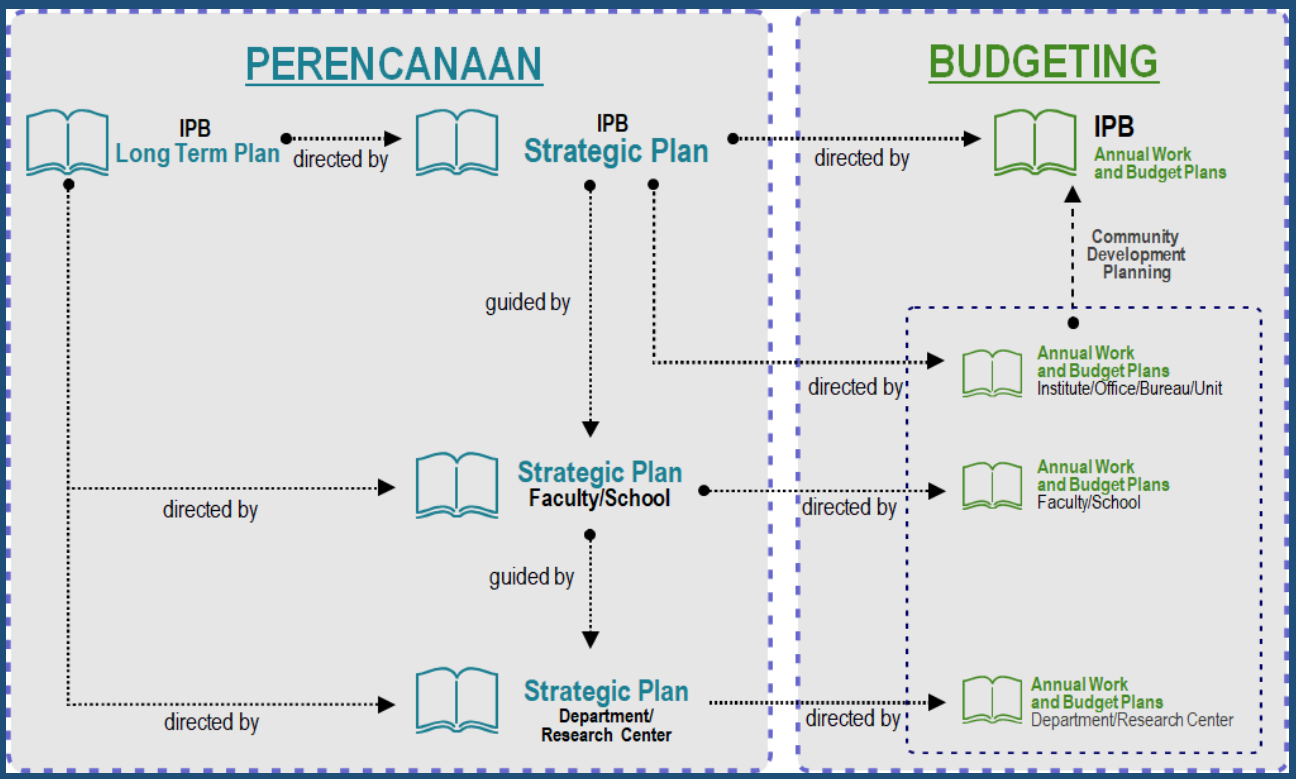


Transformation phases from a Research based University towards becoming a Techno-Socio-Entrepreneurial University in the 2019-2045 period.

Scope and Position of the IPB Strategic Plan

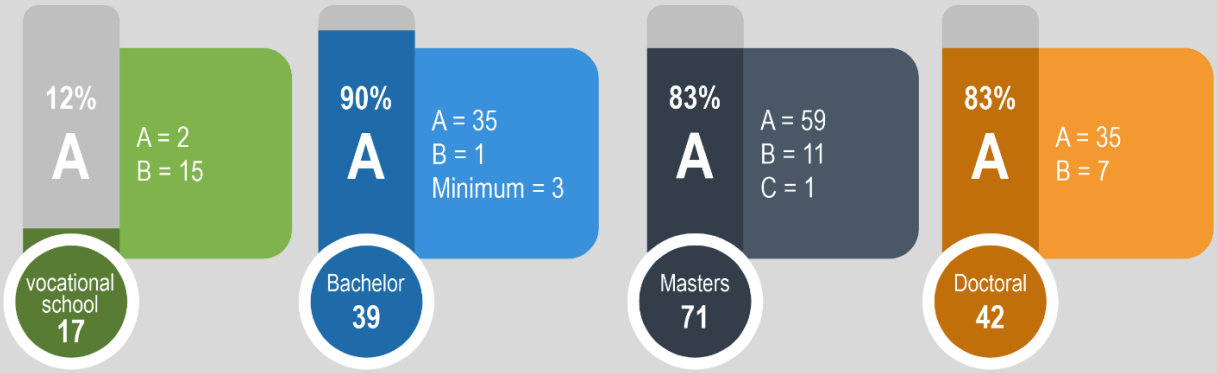
The 2019-2013 IPB Strategic Plan is the five year planning document that covers the first five years of the 2019-2045 IPB Long-term Plan. The 2019-2023 IPB Strategic plan contains the Vison, Mission, Goals, Strategies, and Phases that have been chosen while considering external dynamics, current achievements, and strategic issues that will impact success in achieving the stated goals. This Strategic Plan will be the reference and guide in preparing yearly work plans in the 2019-2023 period.

Connections between the Planning and Budgeting Documents



Current Condition and Future Challenges

Education



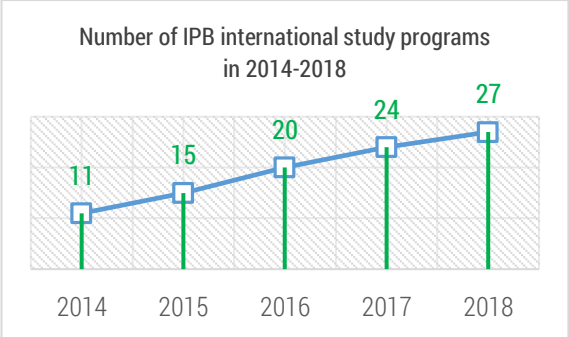
Accreditation ranking achieved by the multi-strata study programs in 2018

IPB provides academic, vocational and professional education. Currently, IPB conducts 17 vocational school study programs, 39 bachelor study programs, 71 masters study programs, and 42 doctoral study programs.

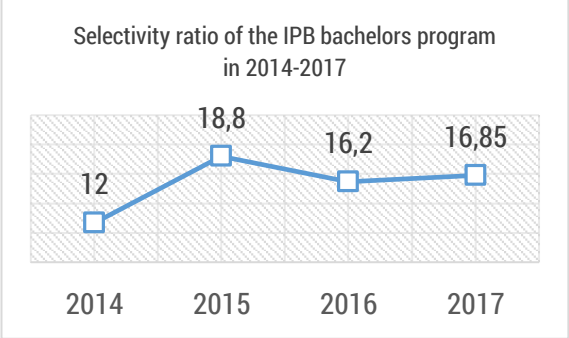
Accreditation status is an important indicator that reflects the quality of education in a study program. IPB is committed to realizing the highest accreditation status (A accreditation) for each study program at the different levels (diploma, undergraduate, professional, and graduate). In striving to make IPB a world class university IPB will also use the international accreditation status as an indicator of successful administration in each study program.

In 2018, just 12% of the vocation programs at IPB were accredited at A level, and thus many study programs in the IPB Vocational Schools need assistance to attain full accreditation. Meanwhile, 90% of the bachelors degree programs, 83% of the masters degree programs and 83% of the doctoral degree programs have already A accreditation.

As of 2018, 27 degree programs have been internationally accredited by accreditation institutions such as AUN-QA ASEAN University Network Quality Assurance, International Federation of Landscape Architects (IFLA), Institute of Marine Engineering, Science and Technology (IMarEST), Society of Wood Science and Technology (SWST), Institute of Food Technologists (IFT), Japanese Accreditation Board for Engineering Education (JABEE), dan Indonesian Accreditation Board for Engineering Education (IABEE).

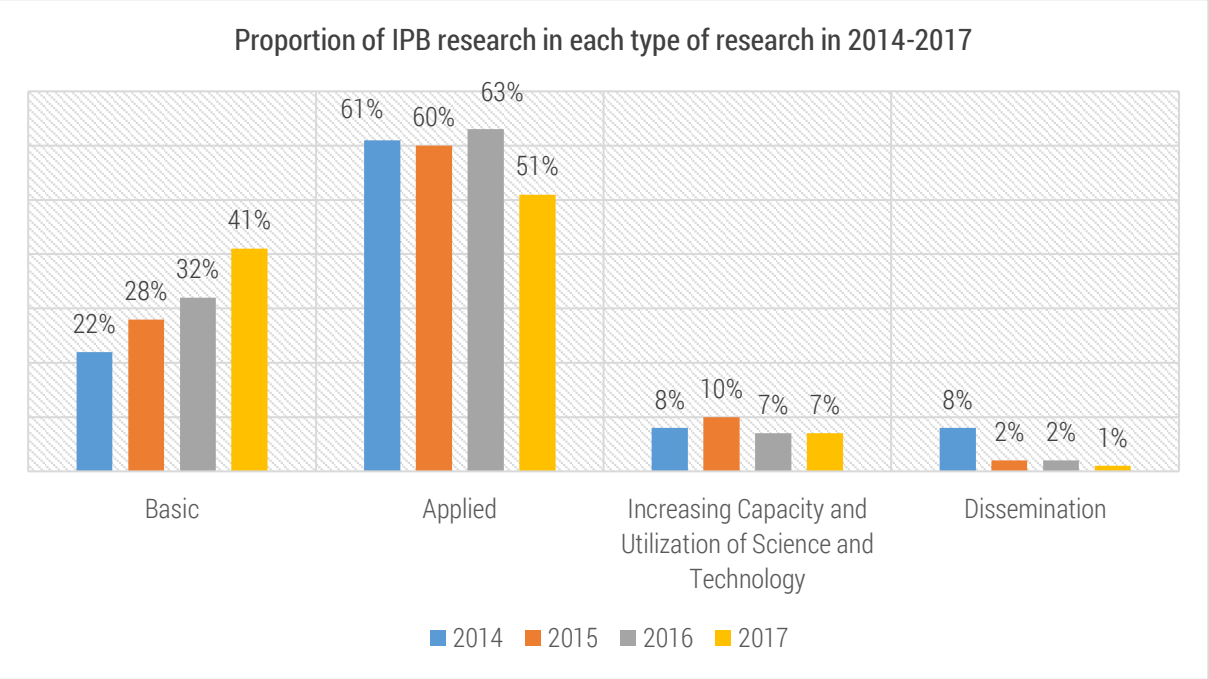


IPB received 2,504 vocational students, 4,007 undergraduate students, 1,025 masters students, 200 veterinarian professional students, and 213 doctoral degree students in the 2017/2018 academic year. Student recruitment selectivity is measured as a ratio of the number of applicants to the total number of accepted students. The level of recruitment selectivity at the IPB vocational programs was 7. This ratio is higher than the Indonesian Higher Education National Accreditation Board BAN PT) standard of 4. Recruitment selectivity in the bachelors program in 2017 was even higher at 16.85. This is much higher than the BAN PT accreditation standard of 5.

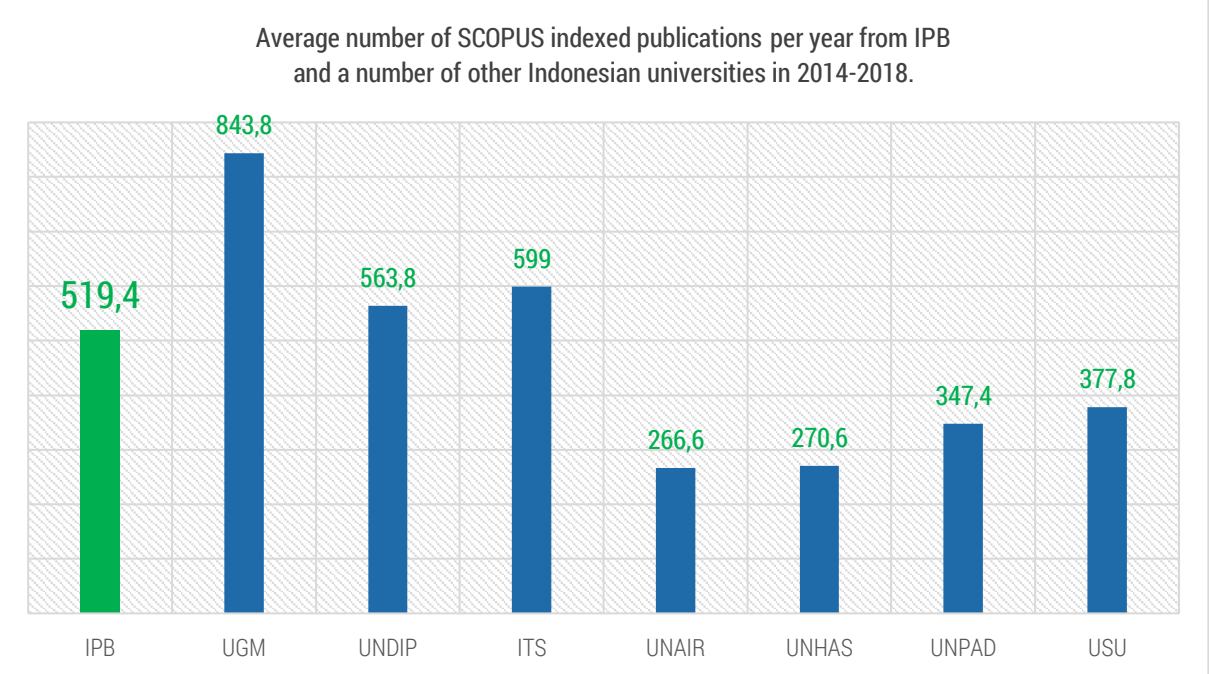


Research

Applied research makes up the majority of the research conducted at IPB. So far, only 6% of all research in Indonesia has been put to practical or commercial use and of this only 2% is being implemented sustainably. Applied research has a great potential to solve many current social problems.



During the 2014-2018 period (as of 7 August 2018) an average of 519,4 SCOPUS indexed journal articles were published per year. This annual rate of publications is lower than a number of other Ministry of Research Technology and Education cluster 1 institutions such as UGM, UNDIP, and ITS.



Public Service

IPB has a number of well developed public service activities such as the Six Universities Initiative Japan Indonesia Service Learning Program (SUIJI-SLP) , IPB Goes to Field (IGTF), ASEANSLP, College Community Service (Kuliah Kerja Nyata), Friday Circle (Jum'at Keliling) in 17 villages around the IPB campus, Posdaya, Creative Agro Field Station (SLAK), IPB Cyber Extension (Tani Center), and Collaborative Innovation Center (CIC).

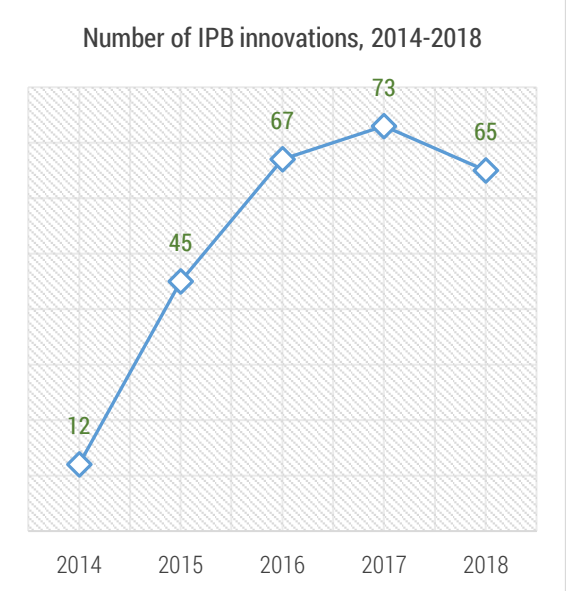
The Friday Circle community service program is done as workshops with the leaders of villages around the IPB campus and includes identifying local potential and opportunities. IPB sends facilitators to villages through the Creative Agro Field Station (SLAK) program. IPB Cyber Extension is an agricultural information system that assists in spreading extension information to villages, managing extension institutions, and exchanging information about agriculture from the central authorities to the regions and vice versa. IPB Cyber Extension provides interactive services such as the website at cybex.ipb.ac.id, email ipbcybex@gmail.com, and other social media. The role of the Collaborative Innovation Center (CIC) is to increase community service performance. This program is conducted through the Nusantara Agriculture Clinic held in a number of regencies including Bojonegoro, Ngawi, Madiun, Gianyar, Pasuruan, Mandailing Natal, Kutai Timor, and Magelang.

The above activities allow students to interact directly with society. Through this interaction students can develop their empathy concerning the problems that society faces and suggest location appropriate solutions.

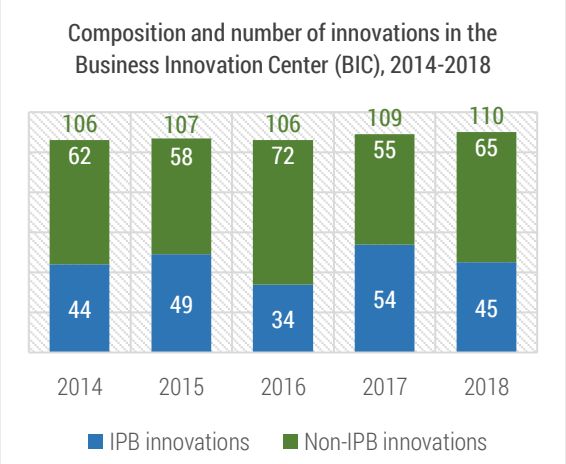
To fulfill its duty to community service, IPB mentors villages and local groups. As of 2017, IPB has mentored 1040 villages and local groups. Mentoring is done through development of micro, small, and medium enterprises, community empowerment, child development, development of regional potential, and other efforts. These are done to both serve the community as well as to disseminate technology from the university out to the wider Indonesian community.

Innovation and Business Development

IPB's human capital are expected to be able to create solutions that are applicable and appropriate to solving problems faced by the larger society. In 2014, IPB produced 12 innovations. While in 2017 the number of innovations produced by IPB increased very significantly to 73 innovations.



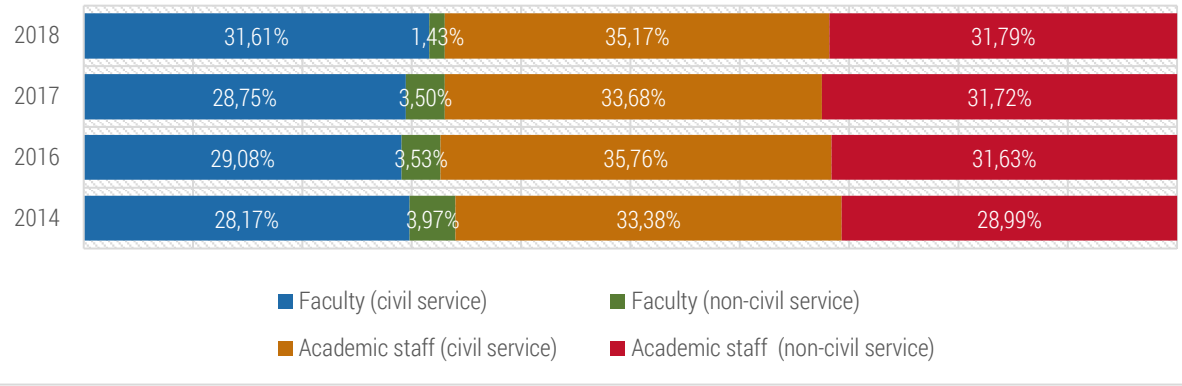
The innovations produced by IPB hold a dominant position in the list of Indonesian innovations in the Business Innovation Center. In 2017, almost half of the 109 Indonesian innovations listed by the BIC were produced by IPB.



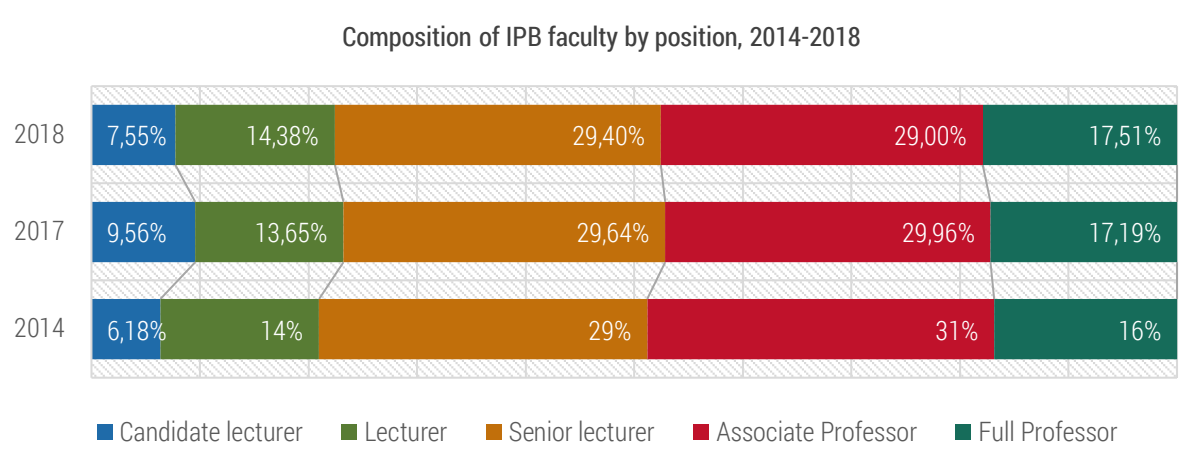
IPB has appointed PT Bogor Life Science and Technology (PT BLST) as IPB's holding company and primary motor to commercialize its research and innovations. The work of PT BLST can be grouped into three categories: science based, asset based, and service based businesses.

Human Capital

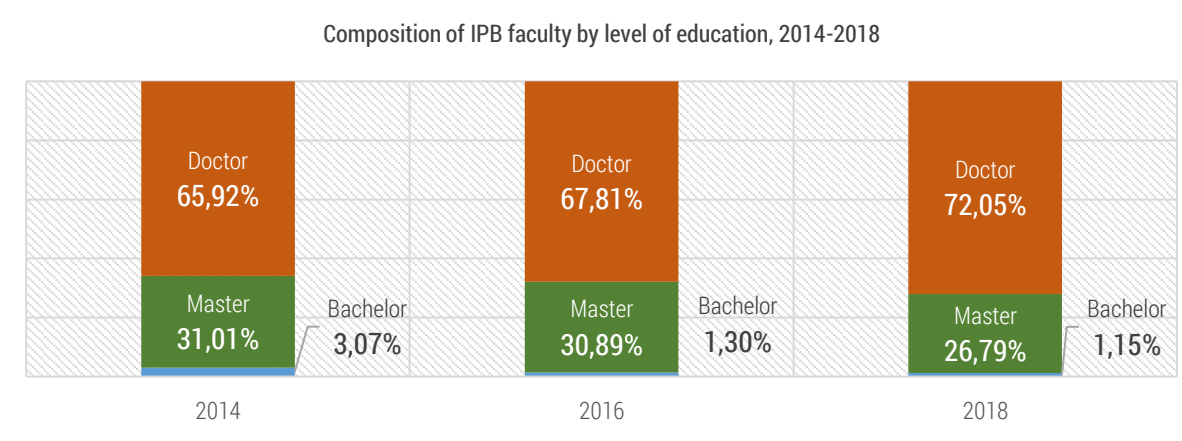
IPB Human Capital according to the IPB Statutes are made up of faculty and education staff, divided into government civil service positions, non-government permanent positions, and non-permanent positions. Over the 2014-2017 period, the IPB Human Resources composition among these categories was relatively stable.



The percent of the faculty made up of full professors has increased every year and by 2018 reached 17,51%.



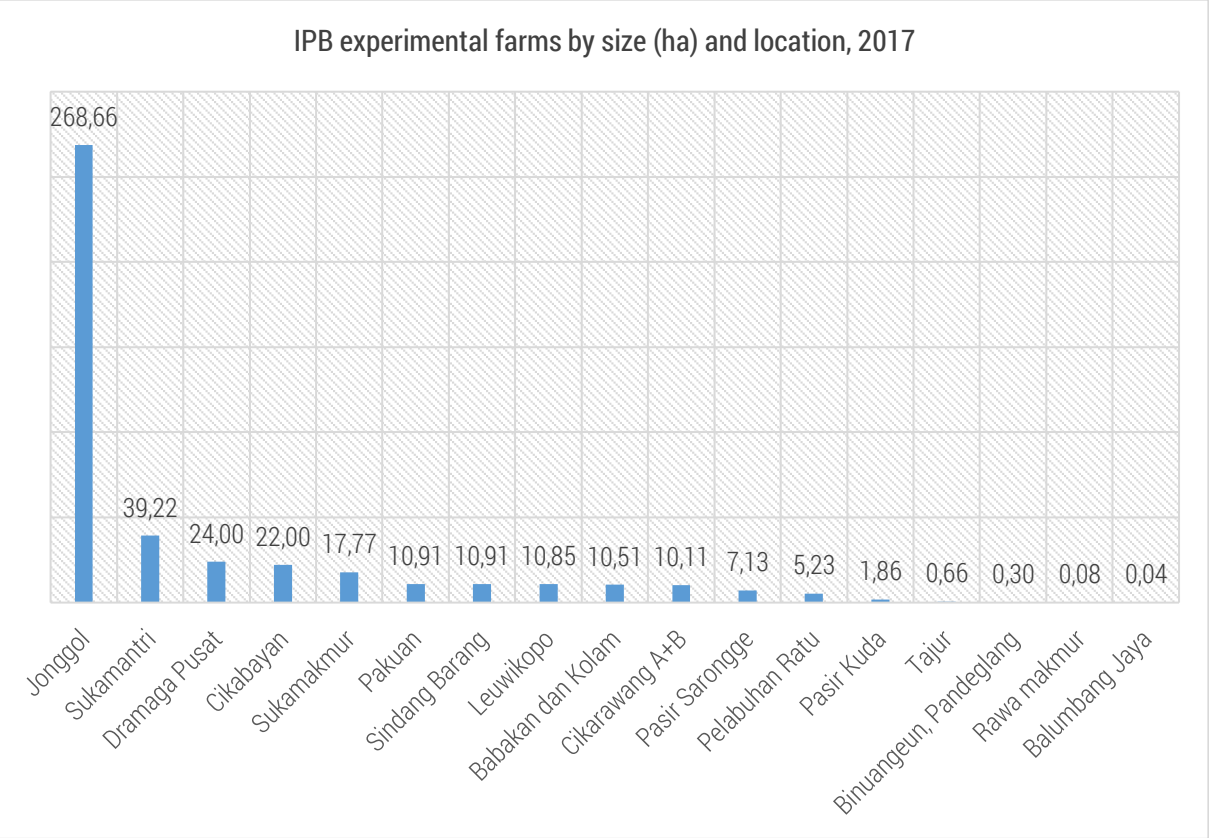
The percent of the faculty with doctoral degrees increased by 1,89% over two years to reach 67,81% in 2016. The percent of faculty with doctoral degrees is an important indicator used by the Indonesian Ministry of Research, Technology, and Higher Education to assess the quality of higher education human capital.



Infrastructure and Facilities

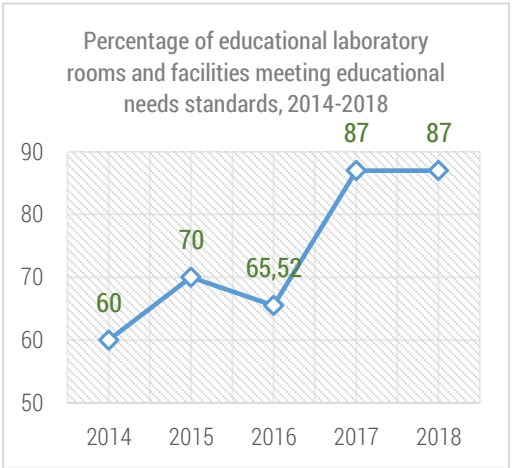
The current number of classrooms at IPB for the bachelor degree programs, graduate programs, and vocational programs is 140 rooms, 124 rooms, and 66 rooms, respectively, and are all in good condition. The classrooms vary in capacity between 50 to 160 persons per class.

IPB has 553 laboratories and 12 field stations with experimental land spread out in the regencies of Bogor, Cianjur, Sukanbumi, Pandeglang, and the Jakarta Special Capital Region.



IPB's academic support units include the Library, University Farm, Language Education Unit, Integrated Chemistry Laboratory, GreenTV, Student Dormitories, Sports and Arts Unit, Polyclinic, Campus Security Unit, Procurement Unit, and Archive Unit. The IPB Library has also developed an e-library with thousands of digital reference collections.

The quality of several scientific services laboratories have met the ISO 17025 standards so that the quality of analysis and measurement results continue to improve be internationally recognized. The laboratories that have met the ISO 17025 standards include the Agricultural Industrial Technology Department's Testing Laboratory, the Aquatic Resources Department's Environment and Productivity Laboratory, the Food Science and Technology Department's Food Analysis Services Laboratory, the Environmental Research Center, the Tropical Biopharmaca Studies Center, the Biology Department's IPB Culture Collection Laboratory, the Agronomy and Horticulture Department, the Animal Disease and Veterinary Public Health Science Department, and the Soil Science and Land Resources Department.



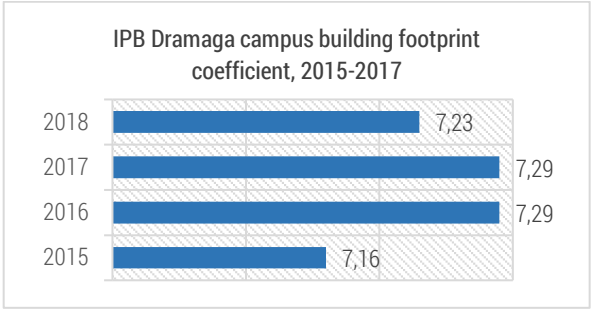
IPB Green Campus

IPB initiated the Green Campus program in 2015 with elements such as green transportation, green movement, green buildings, green energy, and green space. It is hoped that in stages the IPB campus environment will become a full Green Campus by 2020. The goal of this program is to develop an environmentally aware academic community, and to create an IPB campus that is environmentally friendly: zero waste, zero emissions, rich in bio- and cultural-diversity, safe and conducive to a successful learning system, and supportive of agro-eco-edu-tourism programs.

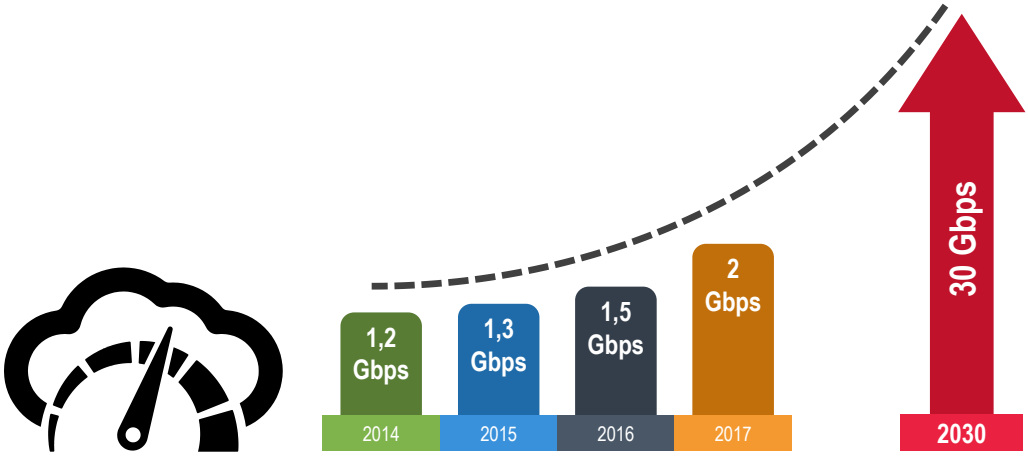
The IPB campus is very effective and efficient in land use and the green principle of saving land has been instituted with a low Building Coverage Ratio of approximately 7%. The size of the green space is a primary reason IPB achieved the second rank position for green campus in the UI GreenMetric World University Rankings in 2017.

Currently, IPB is developing new criteria to enhance efforts to making IPB a Green Campus in 2020. Seven criteria that are the focus of the **IPB Green Campus** effort are listed in order of priority based on ease of achievement and level of urgency, as follows:

1. Compliance with existing environmental rules and regulations
2. Waste management
3. Energy efficiency and climate change mitigation and adaptation
4. Water management
5. Green transportation
6. Biodiversity and landscapes
7. Infrastructure and buildings



Information Technology and Communications



International and Domestic-Bandwidth capacity 2014-2017 (Mbps)

A number of systems at IPB are already starting to be integrated including the Academic Information System (SIMAK), the PDDIKTI Reporting Information System, Tuition Revenue Information System (SIM SPP), the Scientific Works Assessment Information System (SIPAKARIL), the Faculty Performance Assessment Information System (FLKD/BKD), Remunerations Management Information System (SIM-IJ), Performance Management Information System (Simaker), IPB Reputation Management Information System (SIM-WUR), and the Vehicle Registration Information System (SIM-Kendaraan). Additionally, the IPB Quality Assurance Information System (SIM-SPMI), the Research and Public Service Information System (SIM-PPM), the Online Mail Information System, and the Attendance, Leave, and Assignment Information System are in the finalization process.

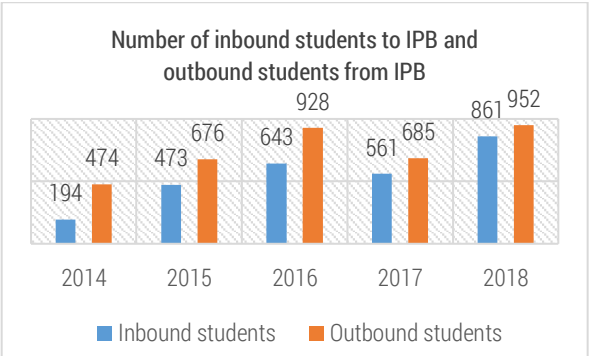
The big data and data science era has made it necessary for IPB to have a data center capable of storing and analyzing all this information. In order to manage this system staff with specialized training and knowledge are required. If all the subsystems are managed well then we will achieve developments in the information and communications technology whose success will be shown by a stable internet connection (accessible, fast, and secure), systems that are integrated with each other, and excellent management of big data and data science.

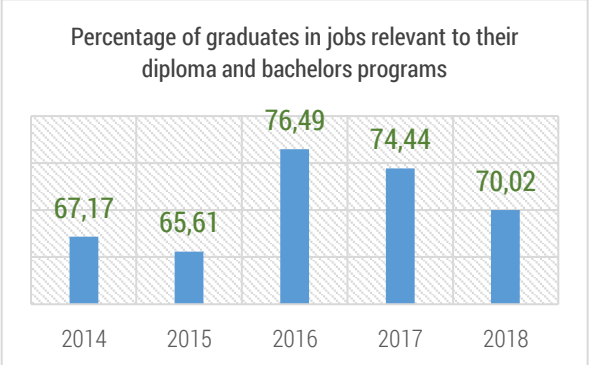
Student and Alumni Affairs

Student and Alumni Affairs cover 1) student mentoring, soft skills, leadership and entrepreneurship; 2) development of the student center, sports center and student dormitories; 3) development of the language center and cross cultural interactions; 4) career counseling and development of relations with alumni.

Inbound and outbound student activities have trended up in the 2014-2017 period with more outbound compared to inbound. This upward trend needs to be maintained during the current period in order to support the internationalization activities that in turn can push IPB's position in the *Asia University Ranking*.

Graduates who work in the agricultural sector made up a consistent and large percentage in both 2016 and 2017 at 76.49% in 2016 and 74.44% in 2017. IPB wishes to focus on producing leaders who can create revolutionary advances in the agricultural sector.





IPB Ranking Achievements

IPB's quality as a whole can be seen by its ranking in the Quacquarelli Symond (QS) University Ranking. This ranking system is a popular and internationally recognized measure of university quality. In additon to this global ranking system, the Indonesian Ministry of Research, Technology, and Higher Education (Kemenristekdikti) also conducts national ranking of Indonesian institutions of higher education. The following is a summary of IPB's achievements in both ranking systems.

QS World University Ranking (WUR)

In 2018, IPB placed in the 751-800 ranking in the QS World University Ranking, and rose in 2019 to 700-751. When compared to other important Indonesian universities IPB is ranked below the University of Indonesia, Gadjah Mada University, Bandung Institute of Technology, and Padjadjaran University.

Rankings from the QS World University Ranking for IPB and other well known Indonesian universities, 2014-2019

Year	IPB	UI	UGM	ITB	UNAIR	UNDIP	UB	UNPAD
2014	701+	309	501-550	461-470	701+	701+	701+	
2015	701+	310	551-600	461-470	701+	701+	701+	
2016	701+	358	551-600	431-440	701+	701+	701+	
2017	701+	325	501-550	401-410	701+	701+	701+	
2018	751-800	277	401-410	331	701-750	801-1000	801-1.000	
2019	701-750	292	391	359	751-800	801-1000	801-1.000	651-700

QS Asia University Ranking

In this category, the ranking only considers institutions of higher education in 17 Asia countries. IPB significantly improved its position in this Asian ranking from 2015 to 2018. In 2015 and 2016, IPB ranked at 201-250, however, in it improved to 191 in 2017 and improved again to 147 in 2018.

Ranking in the QS Asia University Ranking for IPB and other well known Inodnesia Universities, 2015-2018

Year	IPB	UI	UGM	ITB	UNAIR	UNDIP	UB	UNPAD
2015	201-250	71	145	125	127	201-250	251-300	201-250
2016	201-250	79	137	122	147	251-300	-	161-170
2017	191	67	105	86	190	231-240	301-350	199
2018	147	54	85	65	171	240	291-300	176

QS World University Ranking by Subject Agriculture and Forestry

Quacquarelli Symond (QS) also publishes the QS World University Ranking by Subject where each institution is listed by its specialization. IPB ranks very well in its specialization in Agriculture and Forestry in the 51-100 position globally and is the highest ranking Indonesian institution of higher education in this subject area. As comparison, Gadjah Mada University is also in the Agriculture and Forestry subject area while the Bandung Institute of Technology is in the Engineering and Technology subject area.

Rankings of national universities in the QS World University Ranking by Subject, 2014-2018

Year	IPB (*Agriculture and Forestry*)	UGM (*Agriculture and Forestry*)	ITB (*Engineering and Technology*)
2014	NA	NA	NA
2015	101-150	-	-
2016	51-100	-	-
2017	51-100	151-200	215
2018	51-100	201-250	169

Ranking of Indonesian Institutions of Higher Education by the Ministry of Research, Technology, and Higher Education

Since 2015, the Indonesian Ministry of Research, Technology, and Higher Education has published rankings of Indonesia institutions of higher education. This ranking has consistently ranked IPB as the third best university in the nation except in 2016 when it was ranked fourth. In 2017 and 2018, IPB was again placed in the third position among all 2010 public and private non-vocational institutions of higher education in Indonesia. The first and second positions were taken by the Bandung Institute of Technology and Gadjah Mada University, respectively.

Rankings of IPB and other well known Indonesian universities by the Indonesian Ministry of Research, Technology, and Higher Education, 2015-2018

Year	IPB	UI	UGM	ITB	UNAIR	UNDIP	UB	UNPAD
2015	3	4	2	1	8	10	6	7
2016	4	3	2	1	7	9	9	10
2017	3	4	1	2	7	6	8	14
2018	3	4	2	1	7	5	12	9

Strategic Issues

Strategic issues were identified through a review of the external environment, IPB's current condition, achievements in reputation and internationalization, and progress in becoming a research-based university on the way to becoming a techno-socio-entrepreneurial university. The following strategic issues were identified through expert judgment:

A Research activities are not yet optimal	B Need to increase funds from sources other than government budget
C Increase the quality of student intake	D Reorientation of the curriculum, degree programs, and research agenda to keep pace with new scientific developments
E Need to find candidates to replace retiring faculty	F Provisioning and updating of quality academic facilities
G Development of a remuneration system that is fair and just	H Development of a system to reward public service, especially community mentoring and empowerment
I Increase entrepreneurship among the students	J Improve institutional digital capabilities and adaptation to new digital technology
K Finalization of the process of transforming IPB to attain status as a state university with autonomous governance (PTN-BH)	L Need to develop bioenergy, biomaterials, and healthy food

IPB in the 4.0 Era

The world is now in the Industrial Revolution 4.0 era, the fourth generation in evolving social structure, the era based on internet connections, colored by artificial intelligence, super computers, genetic engineering, nanotechnology, self driving cars, innovation and change occurring at exponential speed and impacting so many components of modern life. One characteristic of the Industrial Revolution 4.0 is pervasive disruptive innovation that will change today's Global Education Order. Disruptive innovation has changed society from the Industrial Society to become the Smart Society; changing our lifestyle from one dictated by Time Constraints into one that is Connected and Timeless; turning the Millennial generation into the Creative, Connected, Fast, Borderless and Collaborative Generation.

Thus educational institutions including IPB must adapt and make way for new ways of thinking in order to become part of the new Industrial Revolution 4.0 ecosystem. Why does IPB need to be concerned about this? Because IPB's students come from this new generation. The changing social order and lifestyles will have a strong impact on how students from this generation learn and think. IPB with its various advantages needs to consider carefully now what future policies and actions are needed to produce graduates who are powerful and agile learners with the abilities to overcome the challenges of the Industrial Revolution 4.0 era.

This era also brings new development challenges that IPB should contribute to solving in order to advance the nation. The crucial challenges faced by Indonesia in this era are the following: (a) the need to fulfill the 2030 SDG commitments, (b) disconnectivity in development of the agro and maritime sectors, (c) destruction of natural resources and the environment, (d) the still low welfare of agro and maritime social communities, (e) fragile food security, (f) low productivity and competitiveness in the agro and maritime sectors that have not yet developed to their potential, and (g) regional inequality in development.

The Agro-Maritime 4.0 concept is a new paradigm conceived by IPB to address many of these crucial challenges. Agro-Maritime 4.0 offers a development platform that integrates land and sea regional management in an inclusivemanner and supported by social and economic capital and the use of digital technology in order to increase national productivity. The Agro-Maritime 4.0 development concept views the land, sea, and air as a single unit that involves a complex social, economic, and ecological system that requires a transdisciplinary, integrated and participatory approach. The Aro-Maritime 4.0 concept is built upon a spirit of inclusivity, transparency, environmental sustainability, creativity, critical thinking, and ethics. The aim of Agro-Maritime 4.0 is to build a sustainable, prosperous, just and sovereign Indonesia.

Vision, Mission and Objectives

Visi IPB 2019-2023

In order to answer the challenges of the Industry 4.0 era and to remain consistent with IPB's long term vision, the following was decided upon as the IPB vision for the 2019-2023 period:

" To be a **research based university** that is a **leader** in **innovation** for national self-sufficiency on the way to becoming a **techno-socio entrepreneurial university** that is **globally** known for its **excellence** in the fields of **tropical agriculture, marine science, and bioscience**. "

This Vision statement contains the following key words:

A **research based university** is a university that:

1) Creates a consistent research climate that gives rise to internationally recognized research products that increase IPB's quality.
2) Able to develop an education system with a first class research culture
3) Uses research results as the basis for delivering education, research, and public service.
4) Able to develop a system of collaboration that focuses on research synergy among various scientific disciplines or inter/transdisciplinary scientific fields and that forms an effective network both within and outside of IPB.
5) Provides the funds and the science and technology facilities needed to develop the inter/transdisciplinary scientific advances needed for society to prosper in a changing ecology, economy, society, and culture.

A **leader** is to be a pioneer, a guide, an inspiration others, a change agent, and a reference for others to follow.

Innovation for national self-sufficiency is the application of science and technology to produce new advances in products and services that enhance Indonesia's ability to sustainably and competitively meet its basic needs.

A **techno-socio entrepreneurial university** is:

1) A university that uses technology, sociology, and entrepreneurship in a balanced way such that its management focuses on the development of cognitive and technological capabilities to respond to and actively overcome challenges faced by society; contribute in real terms to economic development, social empowerment, advancing industry, and increasing social welfare,
2) a university that is attractive to potential students and to potential cooperating entities.

Excellence is:

1) Possessing internationally recognized excellence in tropical agriculture, marine science, and bioscience
2) Possessing a system of work culture that meets international standards in conducting the three duties of Indonesian institutions of higher education of teaching, research, and public service (Tri Dharma) such that it is able to produce graduates of nationally and internationally recognized quality

Global is the self-awareness of the people of IPB to be global citizens who care about and contribute to the sustainability of the Earth and the welfare of its inhabitants in a fair and just manner.

Tropical agriculture, marine science and bioscience are the three strategic fields mandated in IPB's statutes, covering agriculture and related sciences that support the development of agriculture to advance the Indonesian nation, including basic sciences, marine sciences, engineering, humanities, economics, business, communications, and social and political sciences.

IPB 2019-2023 Mission

The IPB Mission for the 2019-2023 period is:

1. To carry out higher education by strengthening the research-based university in order to produce superior techno-sociopreneur graduates who possess noble character based on faith and devotion to Almighty God, patriotism, professional competence, millennial soft skills, leadership, global outlook, and who become the trendsetters of innovation and change.
2. Pioneer advanced research in science and technology that is transformative in order to create a sustainable quality of life, and innovations for the nation's small and micro businesses and industry.
3. Deepen IPB's knowledge and capacity in the latest scientific advances in tropical agriculture, marine science, and bioscience in order to become a trendsetter in scientific advancement both nationally and internationally.
4. Increase proactive services that contribute to solving society's challenges and increase the IPB's role in determining the direction of national policies.
5. Strengthen IPB's management system to be a model of modern higher education management in the 4.0 era.

IPB 2019-2023 Goals

The goals of IPB for the 2019-2023 period are:

1. Produce superior techno-sociopreneur graduates who possess noble character based on faith and devotion to Almighty God, patriotism, professional competence, millennial soft skills, leadership, global outlook, and who become the trendsetters of innovation and change.
2. Produce transformative scientific and technological advances in order to create sustainable quality of life, as well as concrete innovations for the nation's small and micro businesses as well as industry.
3. Become a trendsetter in the newest scientific advances in the fields of tropical agriculture, marine science, and bioscience both nationally and internationally.
4. Become proactive in solving society's challenges and to play a strong role in determining the direction of national policies.
5. Become a pioneer in developing modern management systems for institutions of higher education.

IPB 2019-2023 Strategies and Steps

IPB Development Strategy

IPB Development Strategy 2019-2023 are:

1. Solidify IPB as an anchor of academic excellence that produces techno-sociopreneur graduates of superior character.
2. Construct an innovation ecosystem that is adaptive to the digital society transformation.
3. Capitalize on current achievements to strengthen IPB's role in strategic alliances in regional and national development.
4. Build a collaborative spirit for transformation to a culture of excellence by strengthening the engagement of the IPB academic community in making bureaucratic reforms using the principles of a learning organization.
5. Actively build bridges and connections locally, nationally, and globally.

Phases and Work Themes for 2019-2023

The scenario for executing the IPB 2019-2023 Mission is made up of the following 5 phases:

1. **Year 2019: excellent innovation ecosystem.**

   The focus of IPB development in 2019 is to build an innovation ecosystem that is conducive to the growth of innovation through (1) a fair and open incentive system, (2) development of a reliable information and communication system, (3) reorientation of curriculum, and (4) development of facilities.

2. **Year 2020: engaged and competent human capital**

   The focus of IPB development in 2020 will be to push the creation of superior human capital by building a collaborative spirit for transformation to a culture of excellence by strengthening the engagement of the entire IPB community to making bureaucratic reforms using the principles of a learning organization.

3. **Year 2021: excellent innovation**

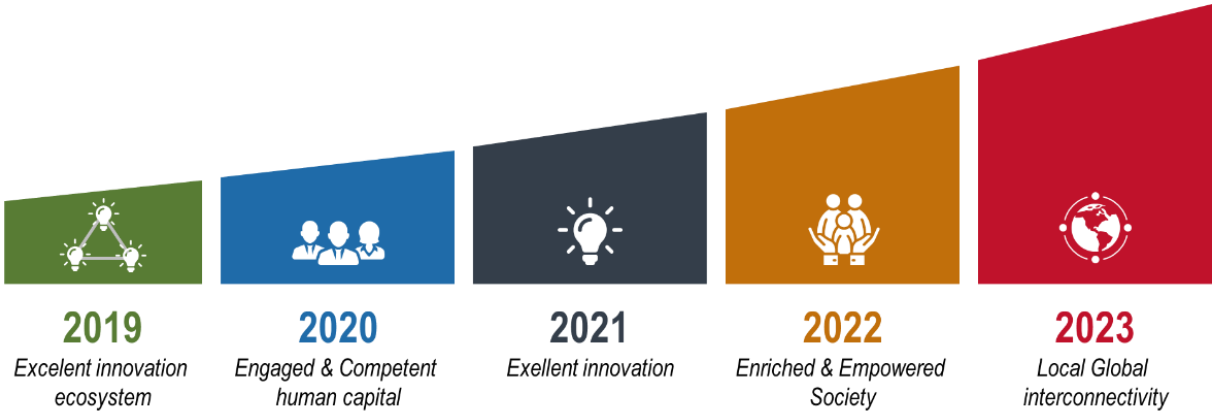
   The focus of IPB development in 2021 will be developing excellent innovation through strengthening the integrated research based university management system towards becoming a techno-socio entrepreneurial university. The institution will lead research that goes towards creating high social and economic impact. This type of research will be in two tracks, one for commercial/economic innovations and one for social innovations. Not all innovations are viable commercial activities but are, nevertheless, important for social functions.

4. **Year 2022: enriched & empowered society**

   The focus of IPB development in 2021 will be to enrich and empower IPB society (students and staff) through leadership that optimizes the utilization of science, technology, and innovations to create positive social impacts at the institutional level. This will include mentoring each level of the working units in the institutional environment so that each is highly empowered and collaborates to create an environment that is conducive to realizing IPB's shared 2019-2023 vision and mission.

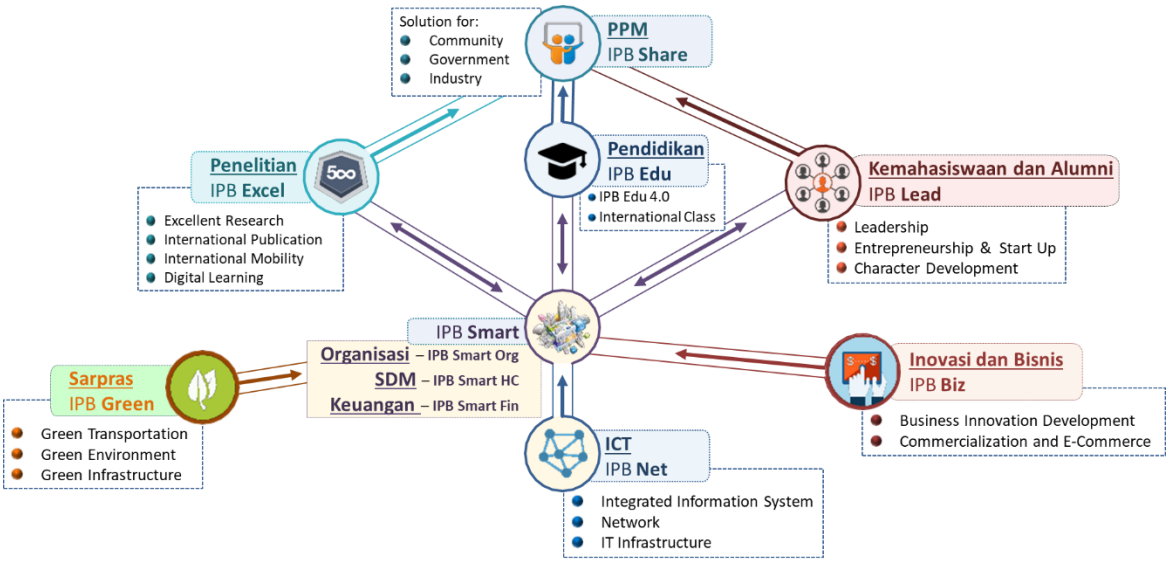
5. **Year 2023: local-global interconnectivity**

   The focus of IPB development in 2023 will be on bridging and being active in building local, national, and international connections. Facing global competition alone is not a good strategy. Broadening interconnectivity is the smart solution to the challenges of this disruptive era. Cooperation and collaboration in the era of global competition will be IPB's primary focus in winning the competition and bringing IPB's innovations to the world stage.



Phases Scheme and Work Themes for 2019-2023 periode

IPB 4.0 Program Groups



IPB's programs are grouped into 10 fields of development. Each field is described as follows:

1. Education: Education for the Millennial Generation

a. Providing education

- Change or harmonize the process of learning with two approaches: the blended learning system and/or the MOOCs (Massive Open Online Courses), ODL (Online Distance Learning) based on the Indonesian Online Learning Sytem (Sistem Pembelaran Daring – SPADA)
- Strengthening life based learning to produce superior graduates who are agile and adaptive.
- Modernize faculty skills and knowledge in virtual learning processes from preparation of e-learning material that is deeper than simply computer based instruction, development of heutagogic material for virtual learning, and development of an assessment program to measure learning outcomes from the online learning materials.
- Provide access to higher education to children of farmers, livestock farmers, fishermen, and people in forested areas.
- Build and strengthen the implementation of international classes, double degree, credit transfer, and exchange programs by increasing the quality and strength of IPB connectivity and collaboration with strategic partners at both the national and international levels.
- Strengthen Expected Learning Outcome (ELO) based education with intensification of research-based teaching and student-centered learning.

b. Structuring the Study Programs and Curriculum

- Reorientate the Curiculum with adoption of the three new literacies, integration of hard and soft skills into the curriculum structure, and mapping out and modernizing IPB's schools of thought in light of the new literacies through a multi-strata degree program structure.
- Reconstruct the IPB 4.0 Vocational School Curriculum Structure based on the three new literacies perspective using the Work-based Curricula approach tied to the structure of the curriculum combined with the 3-2-1 system.
- Structure the study programs and strengthen the curriculum with the latest science and technology according to the IPB 2045 academic architecture plan.
- Initiate planning for an IPB Global Schoolhouse as a catalyst to identify and develop specific scholarship on new literacy, through the opening of a "School or College" at IPB. It is hoped that by 2045 this will become an Education Hub in Techno-Socio-Entrepreneurialship.

c. **Strengthening of entrepreneurship education and character education**

- Prepare for new professions that will become the top opportunities in the Industrial Revolution 4.0 because so many currently existing professions will disappear as a result of disruptive changes.
- Sustainable strengthening of entrepreneurship and business education by developing and updating the school of thought at the IPB Business School.

d. **Increase the Student Intake quality**

- Increased quality of student intake through a new "Leadership Talent Invitation" recruitment track (student organization leadership track, etc.)

2. Research: Research Excellence towards a Techno-Socioentrepreneurial University

a. **Development of Research Implementation**

- Development of an incentive scheme for research, mobility, and international publication.
- Strengthening of synergy and cooperation with other research institutions, government, and industry at the national and global level.

b. **Science Development**

- Preparation of a roadmap for IPB's research directions based on integrated and transdisciplinary sciences to advance IPB's scientific activities to a world class level.
- Development of research to build showcases of food and energy sovereignty and maritime 4.0 technology.
- Design a roadmap for vocational school applied research

c. **Utilization of Research**

- Increased utilization of research through a knowledge management system for academic enrichment, community development, policy reform, and scaling up of research innovations.

d. **Development and Clusterization of Research Centers**

- Establishment of new research centers to meet current challenges.

3. Public Service: Enriching Society for Socio-Resilience

a. **IPB Services and Role in Society**

- Development of the TANI Center to increase services and strengthen the capacities of farmers, livestock farmers, fishermen, and people in forested areas.
- Development of eco-village partnerships and strengthen the IPB Field Stations
- Solidification of IPB's position in building strategic alliances in national and regional policy making
- Strengthening of the economic, social, and ecologic health of the communities surrounding the campus with measurable outcomes
- Development of an incentive scheme for members of the IPB academic family who are successful in empowering communities
- Organization of a model for Vocational School public service
- Construction of an Agriculture and Maritime Museum
- Increased quality of mobile and cyber extension services

b. **International Engagement in the IPB Student Public Service Program (KKN)**

- Development of cross border student mobility by inviting international students to join IPB students in public service programs.

4. Innovation and Business Development: Innovation Driven Business Development

a. Develop Innovation

- Construction of a framework for integrated food, energy, and marine resource self sufficiency to produce superior techno-socioentrepreneurs
- Development of an incentive scheme for intellectual property rights and innovations by faculty and staff

b. Develop Entrepreneurship in Students and Alumni

- Strengthening of the Start-Up School to facilitate entrepreneurship in students and alumni

c. Business Development

- Commercialization of IPB's innovations for income generation through e-commerce and m-commerce
- Acceleration of the role of the IPB Science and Techno Park to grow science-based businesses
- Optimization of IPB's assets including laboratories to strengthen scientific and income generating activities
- Preparation of a holistic IPB Business masterplan

d. Endowment Fund Development

- Stimulation of the performance of IPB business units to grow the endowment fund

5. Organization: Healthy Organization and Smart Governance

a. Organization System Effectiveness and Efficiency

- Reformulation of the remuneration system to be more fair and transparent
- Consolidation of the implementation of IPB as a state university with autonomous governance (PTN-BH)
- Strengthening of the Performance Manangement Information System (SIMAKER) to be more robust and simple
- Strengthening of the role of the faculty and schools in implementing the three duties of Indonesian universities: teaching, research, and public service (Tri Dharma)
- Organize the operation and consolidation of the vocational school management system
- Strengthening of the quality assurance system using digital technology
- Investigate changes to the form of the organization and name of the institution
- Bureaucratic reform through digital transformation and modernization of IPB's management.

b. Increase IPB's Rankings

- Initiate creation of a ranking system that considers IPB's strengths and is aligned with existing World University Ranking schemes while at the same time increasing IPB's ranking based on globally recognized ranking criteria
- Rebranding and strengthening of the Technology Transfer Office (TTO)
- Rebranding of agriculture to increase its attractiveness in order to encourage young men and women to become techno-socionetepreneurs
- Rebranding of IPB in order to increase the quality of incoming student and cooperators

6. Human Capital: Human Capital in the Digital Era

a. Increase Human Capital Performance

- Development of a Talent Center in order to increase capacity of academic staff and faculty
- Create synergy between the planning system and the human capital recruitment system in order to achieve a right-size organization
- Construction of career development pathways for academic staff and faculty
- Accelerate modernization of the digital employee administration system
- Strengthening of the strategic alliance with Indonesian Government Ministries to develop human capital

b. Increase Human Capital Quality

- Recruitment of non-civil service IPB staff following civil service regulations
- Development a holistic welfare scheme for academic staff and faculty

7. Funding: Financial Sustainability and Good Governance

a. Increase Sources of Funding

- Diversification and intensification of alternative funding sources beyond tuition fees and government budget, through utilization of IPB assets, Project Financing Sukuk (SBSN), Corporate Social Responsibility (CSR), as well as from foreign aid (such as from Middle East countries).
- Boosting of profits from the Academic Business Unit, Commercial Business Unit and Supporting Business Unit
- Initiation of a University Social Responsibility (USR) program as part of the IPB's corporate social responsibility
- Raise and manage an endowment fund

b. Strengthen Financial Management

- Strengthening of budgeting, spending, reporting, and monitoring of funds
- Integration of the financial management system via information technology

8. Infrastructure: Green and Smart Infrastructure

a. Management of Facilities and Infrastructure

- Strengthening synergy to increase access to quick and comfortable transportation facilities and infrastructure to and within the main IPB campus at Dramaga
- Increased stability and efficiency of electricity and water supplies at the IPB campuses
- Revitalization of Agriananda as a character-building Labschool for children of IPB faculty and academic staff

b. Availability and Quality of Facilities and Infrastructure

- Updating of laboratory facilities and other learning facilities to meet national and international standards
- Accelerate renovation of student dormitories and the IPB Guesthouse building
- Updating of teaching and research facilities and infrastructure to meet international standards

c. Infrastructure Development

- Development of twinning laboratories through national and international cooperation
- Development of the IPB Dramaga Smart Campus Phase 3 that is disabled friendly
- Development of smart and green buildings on campus as a venue to connect IPB with the international community
- Development of a cemetery for faculty and academic staff
- Development of a Central Dining Hall to ensure then provision and safety of food for IPB students
- Construction of an IPB Health Center
- Facilitatation of a student lounge at each faculty
- Strengthening of security, cleanliness, and work safety to meet international standards
- Consolidation of the environmentally friendly campus transportation system
- Implementation of principles of zero waste

9. Technology and Communications: Robust ICT System

a. Increase the capacity of the IT Infrastructure

- Strengthening of a robust IT infrastructure
- Application of a mobile based management information system that is adapted to the digital culture in order to enhance IPB's reputation and impact

b. Information System Development

- Integration of the information system to manage big data, improve governance, and increase management capacity
- Restructuring of the IPB promotional strategy (media relations, Green TV, Agri FM)

c. IPB Database Management

- Development of the digital library and a modern archive system
- Modernization the function of the library as an information center and knowledge management system

10. Student and Alumni Affairs

a. **Mentoring of Character, Soft Skills, Leadership, and Entrepren**

- Development of a student talent-pool as a forum to build character, patriotic spirit, leadership, entrepreneurship, and millennial soft skills
- Strengthening of character and civic duty education through anti-corruption education and revitalized ethics courses
- Provision of structured leadership training

b. **Increased Student Welfare**

- Measurement and improvement of the nutritional and health status of students and prevent drug abuse and unhealthy behaviors
- Planning and implementation of an IPB Care program for students

c. **Develop Students Interests, Talents, and Reasoning Skills**

- Modernization and clusterization of student organizations
- Development of student sports and arts facilities and increase their competitive achievement

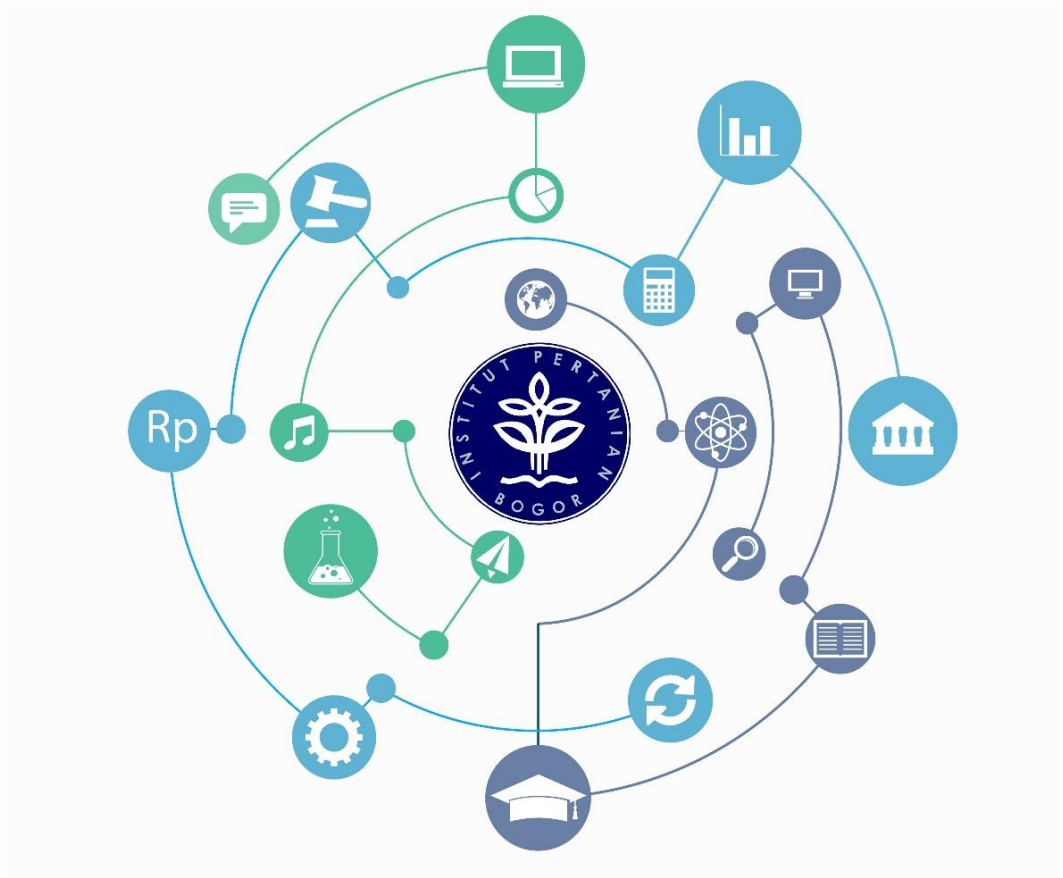
d. **Increase Cross Cultural Interactions**

- Increase in student exchange programs in order to strengthen student internationalization and achievement

e. **Career mentoring for graduates, Alumni Relations and Student Services**

- Capitalize on alumni engagement in order to improve IPB achievement
- Development of a modern integrated services system for students and alumni
- Provide a certificate of soft skills in addition to the diploma
- Strengthening of the career development program in the services and industrial sectors
- Strengthening of the student internship program

Key Performance Indicators



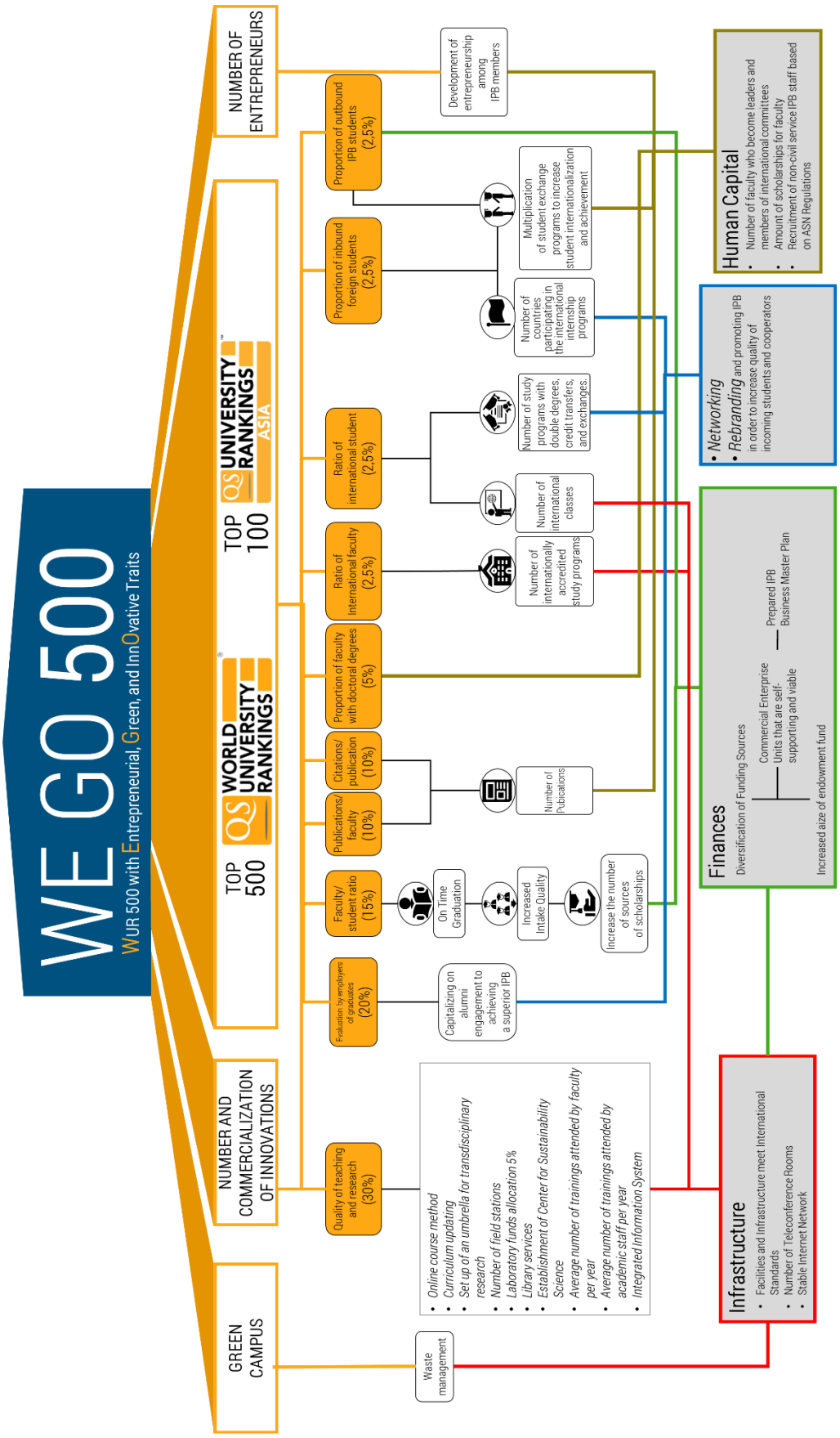
Previous experience shows that there are still inconsistencies between the indicators and performance targets in the IPB Strategic Plan and those in the strategic plans of internal IPB working units. This leads to difficulties in gathering data and in evaluating the targets in each activity.

In this period, the IPB Strategic Plan includes performance indicators that are hoped can be adopted by the working units from year to year. The formulation of indicators that are easy to apply at the lower levels is one of the key successes of this document. The indicators included in this 2019 -2023 Strategic Plan are categorized into ten fields in accordance with the IPB developments identified in the IPB 2019-2045 Long Term Plan.

These indicators are referred to as the key performance indicators, and they are the indicators based on the priority targets of the IPB rector for the 2019-2023 period. The key performance indicators can be sorted based on their cause and effect relationships such that some are categorized as cause indicators, or indicators that must be achieved first in order for the other indicators to be achieved, and results indicators are indicators that are achieved as a result of the achievement of the cause indicators.

After mapping the cause and effect relationships between the indicators, we identified four results indicators as the final targets of this Strategic Plan: WUR 500 (ranking amongst the top 500 universities in the World), IPB Green, innovation, and entrepreneurship. These four results indicators that encompass the end objective of the 2019-2023 Strategic Plan are together captured by the slogan **"WUR 500 with Entrepreneurial, Green, and Innovative Traits (WE GO 500)"**.

The cause indicators that are the preconditions for achieving these end goals include i) quality human capital, ii) accountable and sufficient financing, iii) broad networking supported by promotion and rebranding of IPB, and iv) adequate infrastructure that meets international standards.


WE GO 500
WUR 500 with Entrepreneurial, Green, and InnOvative Traits
TOP 500 QS WORLD UNIVERSITY RANKINGS
TOP 100 QS UNIVERSITY RANKINGS ASIA
NUMBER OF ENTREPRENEURS
NUMBER AND COMMERCIALIZATION OF INNOVATIONS
GREEN CAMPUS
Quality of teaching and research (30%)
Faculty/ student ratio (15%)
Publications/ faculty (10%)
Citations/ publication (10%)
Proportion of faculty with doctoral degrees (5%)
Ratio of international faculty (2.5%)
Ratio of international student (2.5%)
Proportion of inbound foreign students (2.5%)
Proportion of outbound IPB students (2.5%)
Development of entrepreneurship among IPB members
Multiplication of student exchange programs to increase student internationalization and achievement
Number of countries participating in the international internship programs
Number of study programs with double degrees, credit transfers, and exchanges.
Number of international classes
Number of internationally accredited study programs
Number of Publications
On Time Graduation
Increased Intake Quality
Increase the number of sources of scholarships
Evaluation by employers of graduates (20%)
Capitalizing on alumni engagement to achieving a superior IPB
Waste management
Online course method
Curriculum updating
Set up of an umbrella for transdisciplinary research
Number of field stations
Laboratory funds allocation 5%
Library services
Establishment of Center for Sustainability Science
Average number of trainings attended by faculty per year
Average number of trainings attended by academic staff per year
Integrated Information System
Infrastructure
Facilities and Infrastructure meet International Standards
Number of Teleconference Rooms
Stable Internet Network
Finances
Diversification of Funding Sources
Commercial Enterprise Units that are self-supporting and viable
Prepared IPB Business Master Plan
Increased aize of endowment fund
Networking
Rebranding and promoting IPB in order to increase quality of incoming students and cooperators
Human Capital
Number of faculty who become leaders and members of international committees
Amount of scholarships for faculty
Recruitment of non-civil service IPB staff based on ASN Regulations

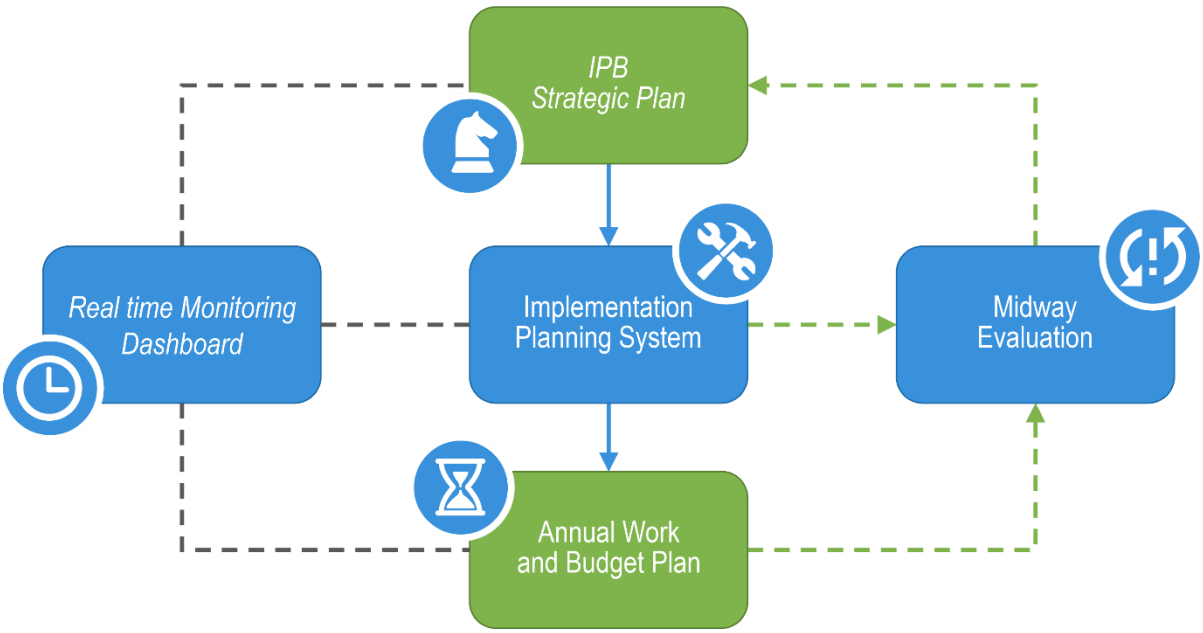
Monitoring and Evaluation

Monitoring will be done in real time using dashboards that can be accessed by users and decision makers at anytime the information is needed. Thus there is the need todevelop an information system that can display the data from monitoring the execution of the Strategic Plan in real time. Functions like this are best integrated as enhanced features in existing systems such as the Performance Management Information System.

Evaluation should be done at least two times during the Strategic Plan period: midway through and at the end of the period. The evaluation at the midway point will useful for identifying necessary corrective steps by comparing the planned with the actual achievements, with sufficient time to carry out the corrective steps in the second half of the Strategic Plan period. Results of the mid way point evaluation can include recommendations for revising the Strategic Plan.

The final evaluation will be done to measure the level of success from the execution of the Strategic Plan. Results of the final evaluation are likely to become the primary material in preparing the Presidents Accountability Report at the end of his term and be the basis for the preparation of the strategic plan for the next period.

The monitoring and evaluation arrangement will be carried out in accordance with the Supervisory Board (MWA) Regulation Number 10/MWA-IPB/2014 about the Mechanism for Monitoring and Evaluating the Performance of the IPB Rector. Among the mandates of the Board is the requirement that the monitoring and evaluation of the Rector be in accordance with the timing and achievement of yearly milestones identified in the Strategic Plan, Key Performance Indicators, as well as the Work Plan and the Annual Performance and Budget Plan (RKAT).



Conclusion

It is hoped the IPB 2019-2023 Strategic Plan document can benefit all of IPB's stakeholders including faculty, academic staff, local and national government, farmers, fisherman, and other business entities as well as policy makers. With the formulation of this Strategic Plan document it is hoped that the synergy between IPB's stakeholders will continue to increase so as to make IPB's 2019-2023 Vision a reality: "To be a research based university that is a leader in innovation for national self-sufficiency on the way to becoming a techno-socio entrepreneurial university that is globally known for its excellence in the fields of tropical agriculture, marine science, and bioscience."

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IPB's role and performance will continue to grow
if IPB is able to promote itself carefully
in this dynamically developing era.
The Industrial Revolution 4.0 is an opportunity and a challenge
that can be optimized to solidify IPB's role and performance nationally,
regionally, and globally.
The IPB Strategic Plan 2019-2023 is a key document in guiding IPB
to formulate programs and activities for the next five years.
In accordance with the phases designated
in the 2019-2045 IPB Long Term Plan,
the 2019-2023 period is the Strengthening
the Research-Based University phase.

The IPB University Strategic Plan 2019-2023

The focus of IPB development in this period
will be on strengthening the research culture,
increasing research performance and relevance
to create innovations that enhance IPB's reputation,
commercializing innovations, and developing businesses
with strong support from the research management system,
the education and research infrastructure, funding,
the information system, the incentive system for publications,
and innovations and intellectual property rights management.

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