

Inovasi dan Potensi Riset dalam Pengembangan Keilmuan dan Pembelajaran

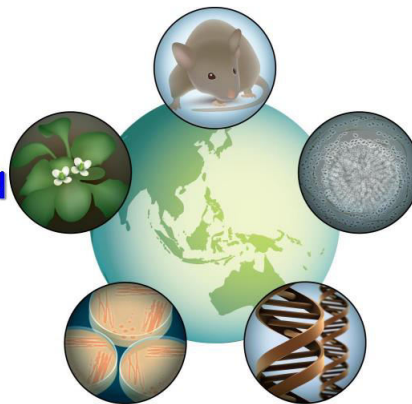
Hery Purnobasuki

Universitas Airlangga Surabaya

Email: hery-p@fst.unair.ac.id



INOVASI DAN POTENSI RISET DALAM PENGEMBANGAN KEILMUAN DAN PEMBELAJARAN



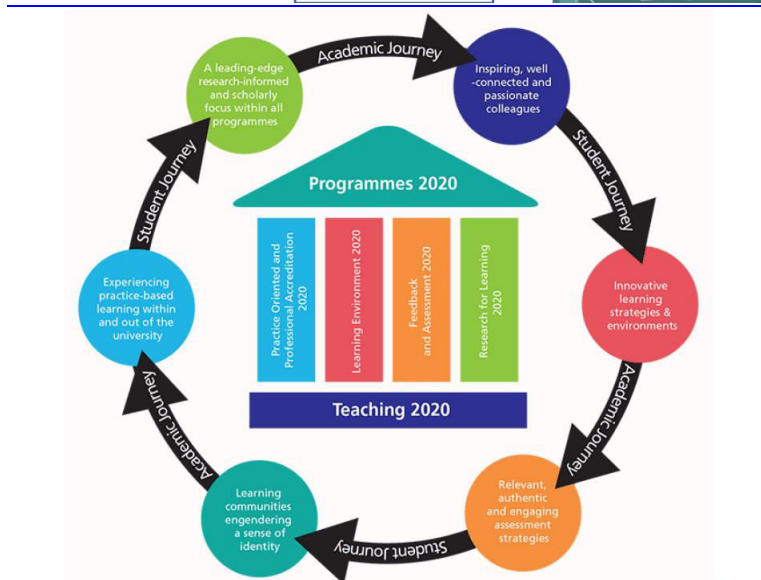
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Scopus ID: 8544457800
ORCID : orcid.org/0000-0002-0562-2058



What we talk about when
we talk about research
into teaching
... or research-informed
teaching
... or research for
learning...



“A university is defined by the quality of its academic conversations, not by the technologies that service them.”



What is research?

“a process of investigation leading to new insights, effectively shared”.





Learning 2020

“Learning 2020 will shape our long term direction so we achieve an outstanding performance across all of our teaching and academic programmes to help our students realize their full potential, **and to ensure our research impacts student learning.**”



Research for Learning

Draft objectives:

- provide innovative and effective learning opportunities
- promote student engagement with the latest thinking and practice in the discipline
- involving staff who are themselves engaged with research
- develop skills and attributes of significant value to future careers.



Research for Learning

Four inter-linked strands:

1. How research (including practice-based research and scholarship) feeds into programme design, curriculum content and delivery (and provides distinctiveness)
2. The direct contribution of research-active staff to teaching (including professoriate, doctoral candidates and research-only staff)



Research for Learning

Four inter-linked strands:

3. How pedagogic research can promote teaching excellence through innovative teaching practice and exciting learning environments
4. The acquisition of research and related employability skills among students

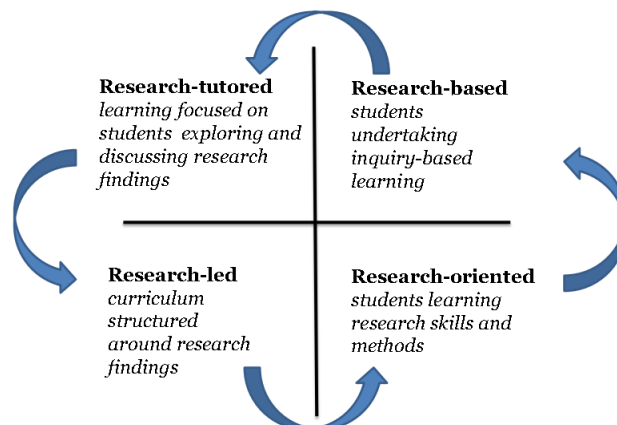


Research for Learning

Graduate attributes (Jenkins, for QAA Scotland)

- Informed of current developments in subject
- Critical thinking and understanding
- How knowledge is created, advanced and renewed
- Ability to identify and analyse complex problems, evaluate evidence and generate solutions
- Ability to employ analytical techniques and skills

Research-informed learning



After Healey M (2005) *Linking research and teaching: exploring disciplinary spaces and the role of inquiry-based learning*



Research for Learning

Key questions

What are we doing?

Is it successful? (best practice)

How can we strengthen integration? (policy, process, practice)

What are the barriers?

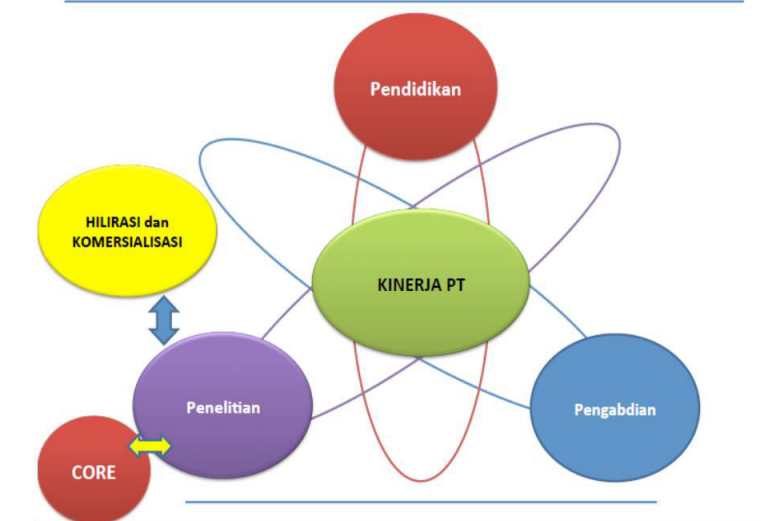
How can resources be deployed to enhance this?

Research for Learning

Some issues

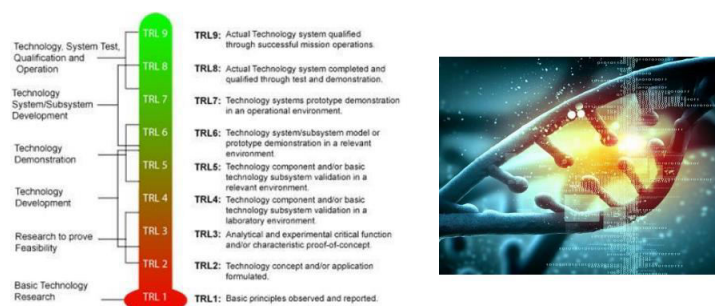
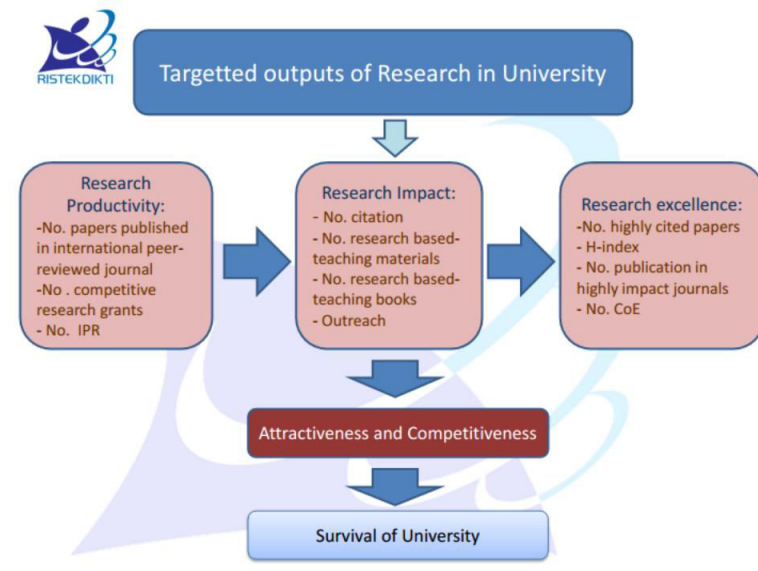
- Harnessing and promoting pedagogic research
- Time for scholarly activity and pedagogic research (and evaluation)
- Engaging excellent researchers in teaching and curriculum development
- Role of Research Centres
- Alignment of student interests and research strengths
- Integration of key roles, structures, investments across institution

Tri Dharma PT Vs Kemenristek Dikti

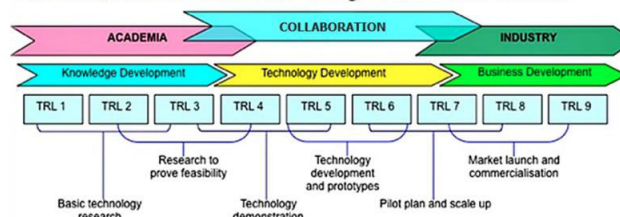


HE Research as Economic Driver

- Global knowledge-economy → Strategic importance of national research strategy
- National and regional development → production of new knowledge, knowledge transfer and economic performance
- Role and mission of HE → task of growing research capability and capacity no longer optional
- Innovation, application and knowledge specialization → competitive advantage and performance



The Innovation Chain: Converting Science into Wealth





Kementerian Riset, Teknologi dan Pendidikan Tinggi - Ditjen Penguatan Inovasi

5

Arah Kebijakan Kemristek Dikti

Arah:

1. Meningkatkan tenaga terdidik dan terampil berpendidikan tinggi.
2. Meningkatkan kualitas pendidikan tinggi dan lembaga litbang.
3. Meningkatkan sumber daya litbang dan pendidikan tinggi yang berkualitas.
4. Meningkatkan produktivitas penelitian dan pengembangan.
5. **Meningkatkan inovasi bangsa.**

Fokus bidang utama :

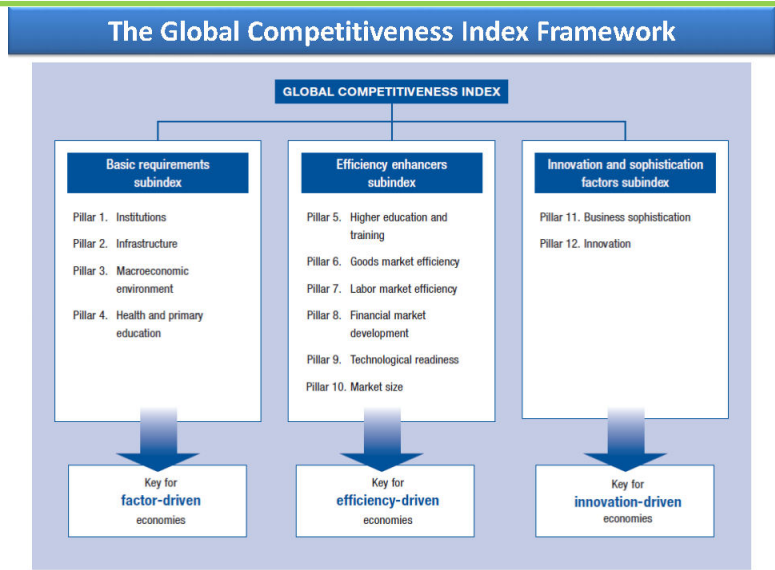
1. Pangan,
2. Energi,
3. Teknologi dan Manajemen Transportasi,
4. Teknologi Informasi dan Komunikasi,
5. Teknologi Pertahanan dan Keamanan,
6. Teknologi Kesehatan dan Obat, dan
7. Material Maju.



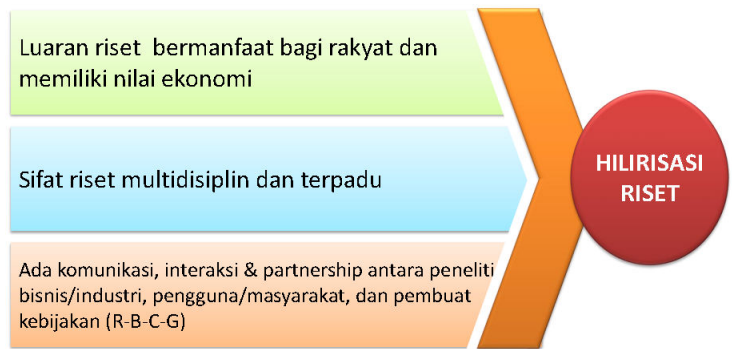
Kementerian Riset, Teknologi dan Pendidikan Tinggi - Ditjen Penguatan Inovasi

Tujuan dan Sasaran Strategis Kemristekdikti 2015-2019





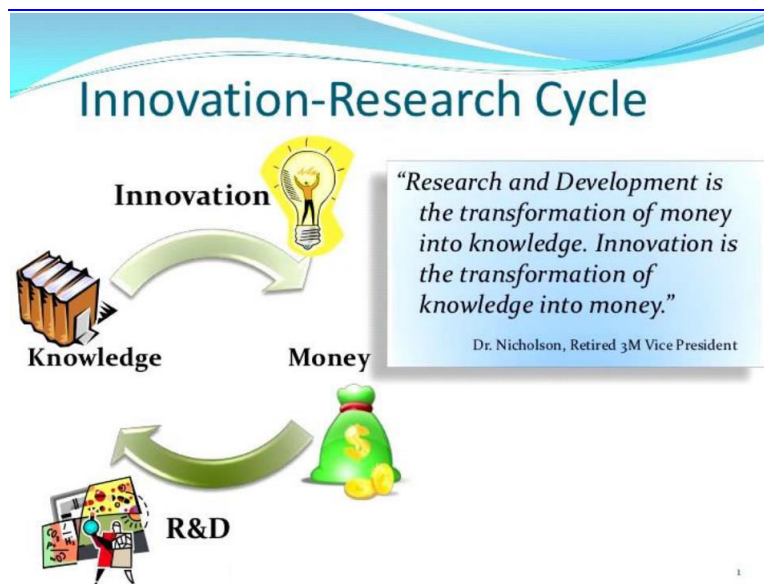
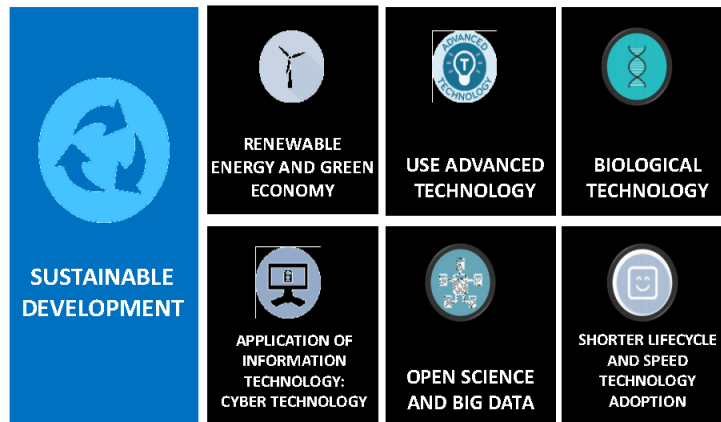
Hilirisasi Riset



Dampak Hilirisasi Riset



Trend in New Economy: Opportunities



Mengapa Harus Bersikap Inovatif ?



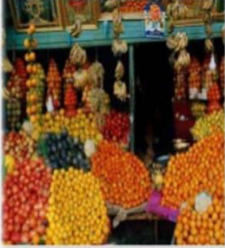


Karena :
Tuntutan zaman bahwa besok harus lebih baik dari hari ini, dan hari ini harus lebih baik dari kemarin !

Artinya :
Segala sesuatu harus selalu diperbaiki terus menerus tanpa henti

Konsekuensinya :
Siapapun juga harus bersedia berpartisipasi dalam memperbaiki kualitas kehidupan di segala bidang.

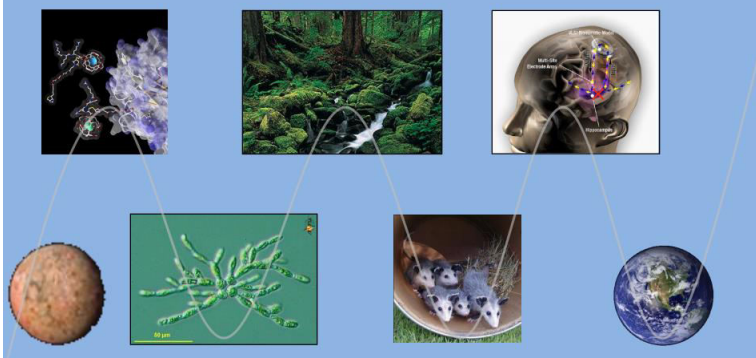
Jadi : siapapun juga harus mau dan mampu bersikap inovatif

Science Can Help Solve Some of the World's Greatest Challenges

Food	Energy	Protection
		
Providing enough healthy food for people everywhere	Decreasing our dependence on fossil fuels	Safeguarding life and the environment

Life in Transition

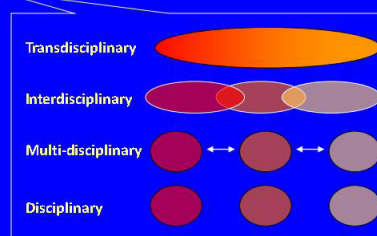
Biology is the narrative of life on Earth and the story of the unexpected...



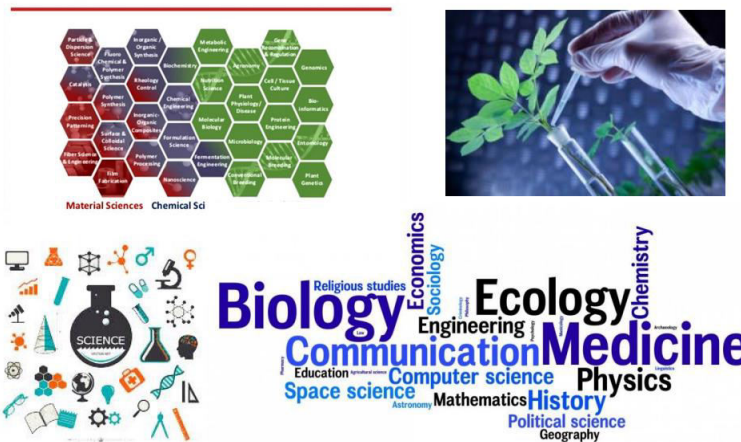
Life Sciences In Transition

The Role of Theory in Advancing 21st-Century Biology

Catalyzing Transformative Research



Integrated Science is very important



Multidisciplinary Programs

- Dynamics of Coupled Natural and Human Systems 
- Interdisciplinary Training for Undergraduates in Biological and Mathematical Sciences 
- Ecology of Infectious Disease 

Program Peningkatan Kapasitas Inovasi

No	Program	Tujuan	Sasaran	Luaran
1	SISTEM INOVASI NASIONAL DAN DAERAH	Meningkatnya daya saing daerah	Terbangunnya sinergi aktor inovasi pusat dan daerah	Pengembangan Sistem Inovasi Daerah Berbasis Komoditas Unggulan di Berbagai Locus
2	PENGEMBANGAN PERUSAHAAN PEMULA BERBASIS TEKNOLOGI	<ul style="list-style-type: none"> • Penguatan Peran Inkubator Bisnis Teknologi • Penumbuhan tenant yang dibina untuk menjadi Perusahaan Pemula Berbasis teknologi • Pemodelan inkubasi wirausaha baru berbasis inovasi teknologi melalui Inkubator Bisnis Teknologi 	Tumbuhnya tenant yang dibina untuk menjadi perusahaan pemula berbasis teknologi	Adanya 54 tenant yang dibina untuk menjadi Perusahaan Pemula Berbasis Teknologi
3	PENERAPAN TEKNOLOGI DI INDUSTRI	<ul style="list-style-type: none"> • Meningkatkan kapasitas teknologi dan SDM Iptek untuk dimanfaatkan di industri • Meningkatkan kemampuan industri nasional yang pada akhirnya akan meningkatkan daya saing industri 	Meningkatnya jumlah teknologi lembaga litbang /perguruan tinggi/industri yang dimanfaatkan di industri.	terciptanya teknologi yang dapat dimanfaatkan di industri yang pada akhirnya akan menuju kemandirian iptek untuk industri.
4	DISEMINASI PRODUK TEKNOLOGI KE MASYARAKAT	Mempercepat diseminasi dan pemanfaatan teknologi yang potensial dari hasil riset dan inovasi lembaga litbang ke industri melalui penerapan iptek di masyarakat	<ul style="list-style-type: none"> • Meningkatkan komersialisasi produk inovatif ke industri; • Meningkatkan produktivitas, nilai tambah, kualitas maupun daya saing produk berbasis iptek di masyarakat. 	12 teknologi yang dihasilkan oleh lembaga litbang atau industri nasional yang bekerja sama dengan Pemerintah Daerah, yang dimanfaatkan oleh masyarakat, baik secara ekonomi maupun sosial



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Research
and **Innovation**

BERTAMA KASIH



hery-p@fst.unair.ac.id
081703850879