

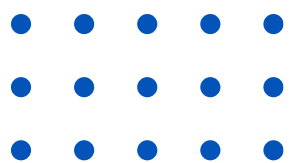
Komersialisasi Teknologi

Pelatihan JF API Batch 4

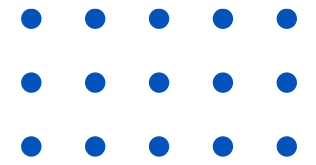


Speaker
Adityo Wicaksono

Date
23 Juli 2026



Profil



Pendidikan:

- S1 Desain Produk, ITB
- S2 Master of Business, Innovation & Entrepreneurship, The University of Queensland

Pengalaman dalam komersialisasi IPTEK:

- 2010–2019: Pusat Inovasi LIPI
- 2023–2024: BLU Pusat Pelayanan Teknologi

Publikasi:

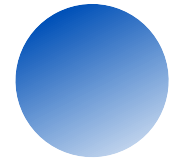
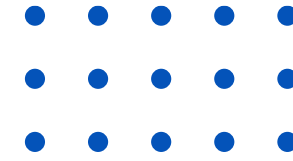
- [Phenomenography of Sustainable Tourism in Luxury Hotels](#), 2025, *Academica Turistica–Tourism and Innovation Journal*.
- [Interactive components of digital MSMEs ecosystem for inclusive digital economy in Indonesia](#), 2024, *Journal of the Knowledge Economy*.
- [The dynamics of economy in the regional MSMEs' digital ecosystem](#), 2024, Springer.
- [Conceptualizing a seamless model of technology transfer](#), 2024, *Foresight and STI Governance*.
- [Local supply chain actor roles in farmer organisation information networks](#), 2024, *World Development Perspectives*.
- [The hegemony in artificial intelligence technology: a depiction through patent analysis](#), 2023, *International Journal of Foresight and Innovation Policy*.
- [Understanding technological knowledge spillover in a science technology park ecosystem](#), 2022, *Asian Journal of Technology Innovation*.
- [Incubation scheme in among incubators](#), 2020, *International Journal of Innovation and Technology Management*.

Paten:

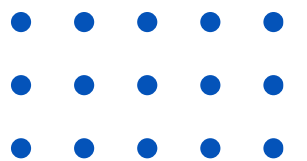
- Metode untuk meningkatkan kuantitas dan kualitas kandungan sitronelal dalam minyak sereh wangi – P00202215552
- Metode preparasi koloid nanopartikel perak dan produk yang dihasilkannya – P00202010613
- Sistem pengukuran Jumlah Pelintas – P00201706959
- Metode penyemprotan inhibitor mikrobial dan penyinaran UV pada kain taffeta 210t – P00202203954

Startup:

- PT. Aero Vardana Nusantara – Drone Aerial Seeding



Sesi 1: 10.30-12.00



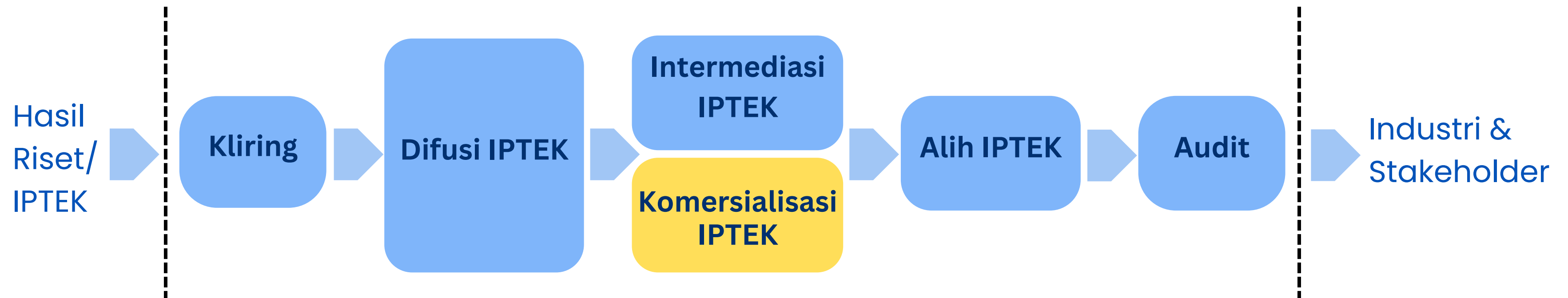
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Pendahuluan (1)

Proses Pemanfaatan IPTEK **dalam Konteks Produsen IPTEK / Lembaga Riset Publik – BRIN / BRIDA.**

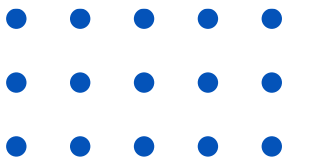


Pendahuluan (2)

- **Commercialization** brings scientific knowledge and technologies into the market through new or improved products and services (Woodfield, 2023).



Channel / Mode	Typical Activity	Citations
Patenting & IP licensing	File patents, negotiate licenses/options with firms	☒ 1 ☒ 5 ☒ 6 +3 MORE
Spin-offs / start-ups	Create academic or student-based ventures	☒ 1 ☒ 10 +2 MORE
Contract & collaborative research	Industry-funded or joint projects, sponsored R&D	☒ 1 ☒ 2 14 +2 MORE
Consulting & contract services	Expert advice, testing, specialized services	☒ 2 14 ☒ 4
Open science / open innovation practices	Open access to data/tools, open collaborations	☒ 1 ☒ 2 12



Pendahuluan (3)

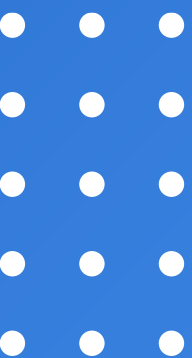
- Komersialisasi Teknologi: kegiatan yang meliputi **Inkubasi Teknologi, Kemitraan Industri**, dan/atau **Pengembangan Kawasan Ilmu Pengetahuan dan Teknologi** (PERBRIN No. 3/2025).

API Pertama	Kompleksitas Sederhana	Mitra UMKM
API Muda	Kompleksitas Sedang	Mitra CV.
API Madya	Kompleksitas Tinggi	Mitra PT.
API Utama	Kompleksitas Sangat Tinggi	Mitra Perusahaan Asing (PMA)



Ruang Lingkup Komersialisasi

Kegiatan	Proses	Output	Evidence
Inkubasi Teknologi	• Evaluasi Teknologi yg diinkubasi • Analisis kelayakan mitra/binaan inkubator	• Startup terbina/ tergraduasi • Lisensi Teknologi	Laporan, SK/ST, BA, Profil Mitra
Kemitraan Industri	• Evaluasi Teknologi • Analisis kelayakan mitra	• Kerjasama/ kemitraan Pemanfaatan IPTEK/ Lisensi Teknologi	Laporan, SK/ST, BA PKS
KST/ STP/ Kawasan IPTEK	• Evaluasi pengelolaan kawasan. • Analisis kebutuhan kawasan. • Analisis mitra kawasan.	• Terkelola/ berkembangnya kawasan IPTEK	Laporan, SK/ST, PKS



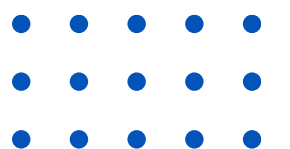


Inkubasi Teknologi (1)

Technology business incubation is a structured way to help new, technology-oriented companies survive and grow, usually by placing them in an incubator program that offers space, services, and intensive support (Sohail et al, 2023; Mian et al, 2016; Leitão, 2022).

Komponen

- ✓ **Physical infrastructure:** office/ lab space, shared facilities
- ✓ **Business support:** coaching/ mentoring, training, advice, consulting
- ✓ **Access to networks:** links to experts, investors, industry
- ✓ **Technology & knowledge resources:** technological infrastructure, R&D linkage, knowledge transfer.





Inkubasi Teknologi (2)

Proses

- **Pra-Inkubasi:** opportunity identification, business planning, entrepreneurship training, validating market need, early prototyping.
- **Inkubasi:** proof of concept, business model design/ business development, customers acquisition, formal company creation.
- **Graduasi**
- **Paska-Inkubasi:** market expansion, internationalization, scaling operations.

KPIs

- **Number and rate of graduated firms per year.**
- **Startup growth, revenues, profits, and job creation.**
- **Total venture capital/ angel funds raised.**
- **Number of patents and other intellectual properties.**



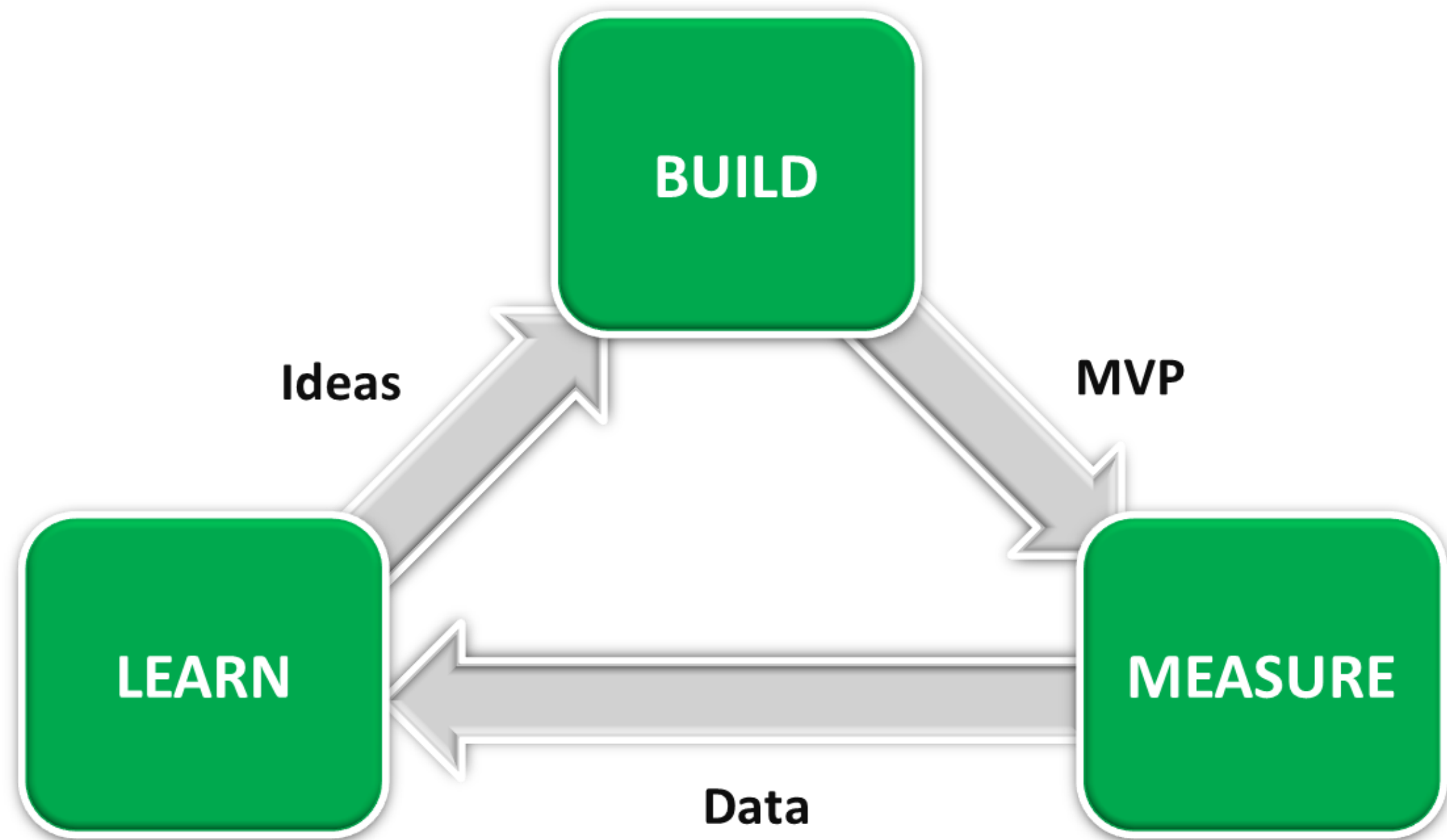
THE LEAN
STARTUP

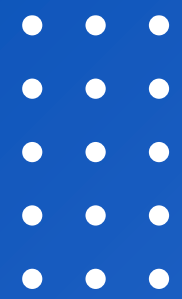


Eric Ries

Inkubasi Teknologi (3)

Framework 1. Lean Startup

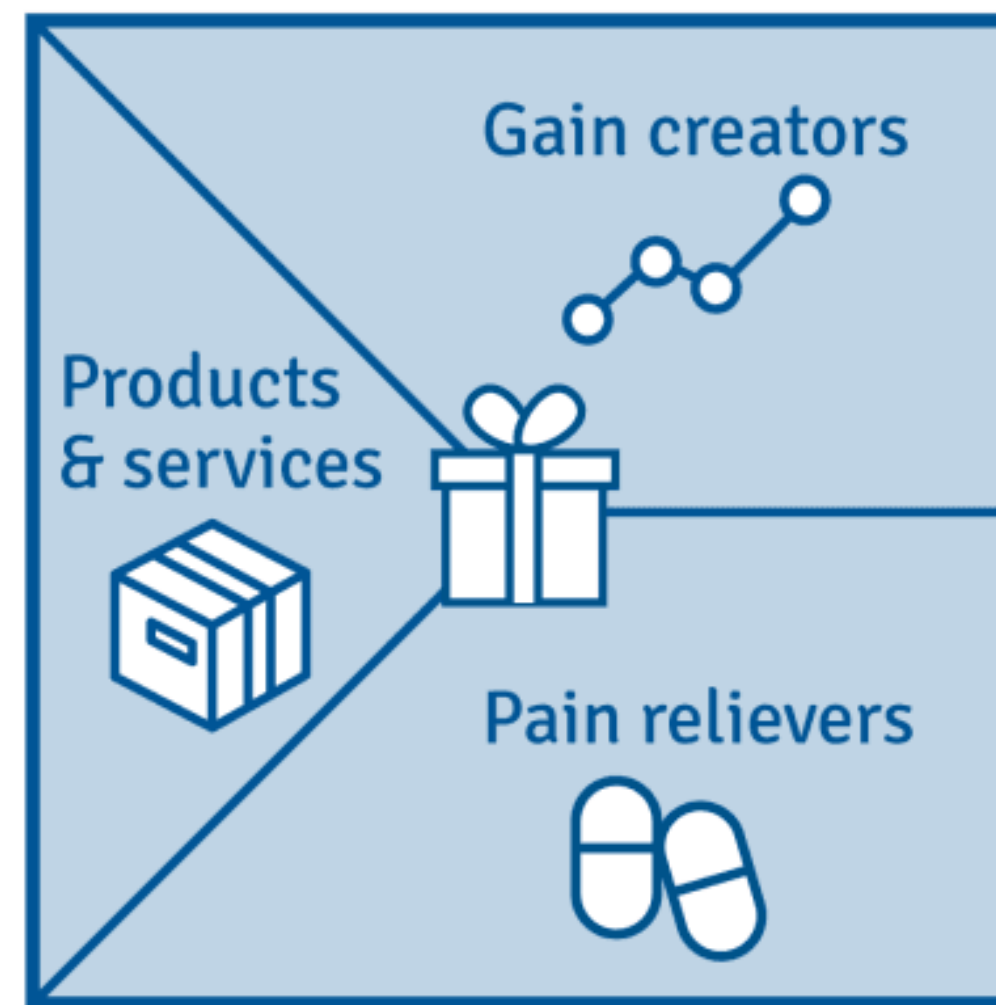




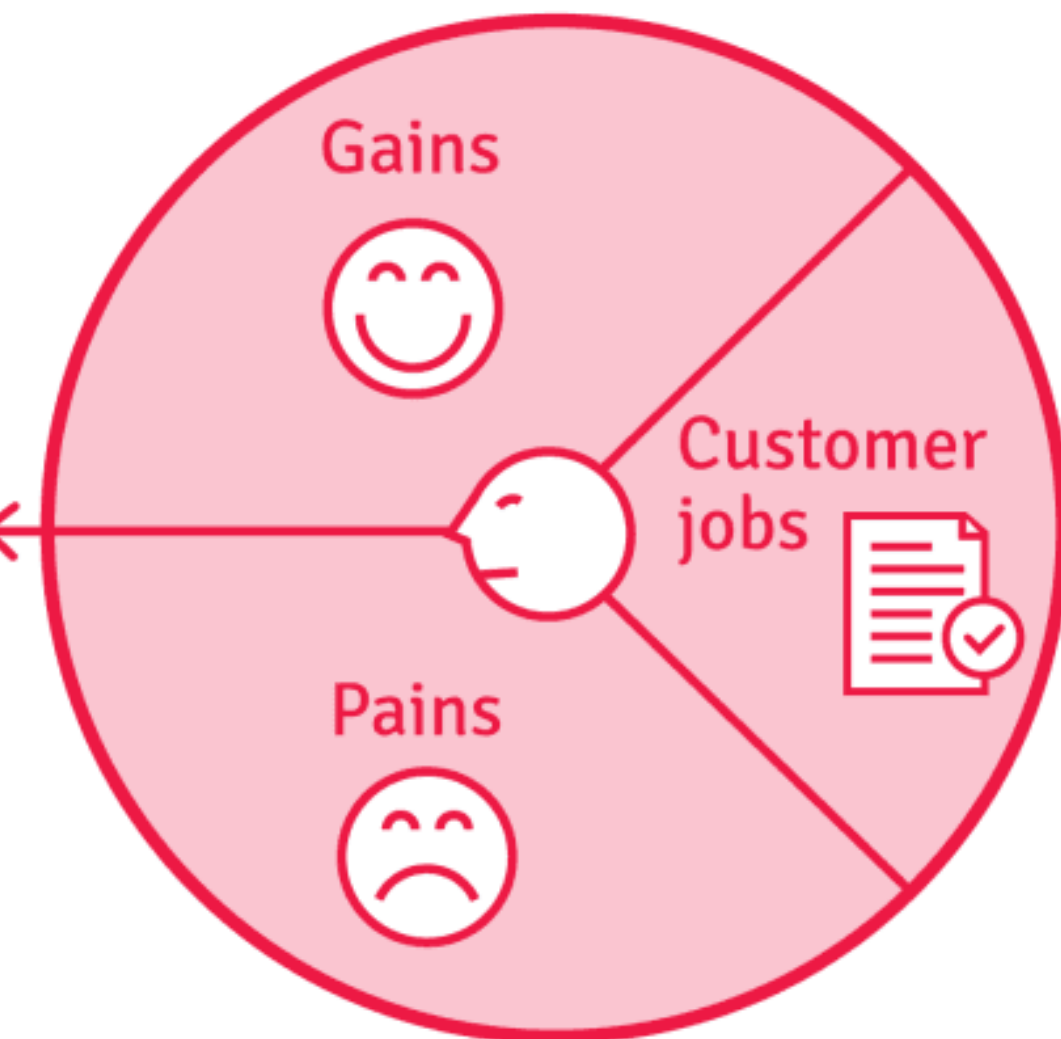
Inkubasi Teknologi (4)

Framework 2. Value Proposition Canvas

Value Proposition



Customer Profile



VPC Example

Inkubasi Teknologi (5)



Gain



stage 1
supported
sitter

4 oz

Job

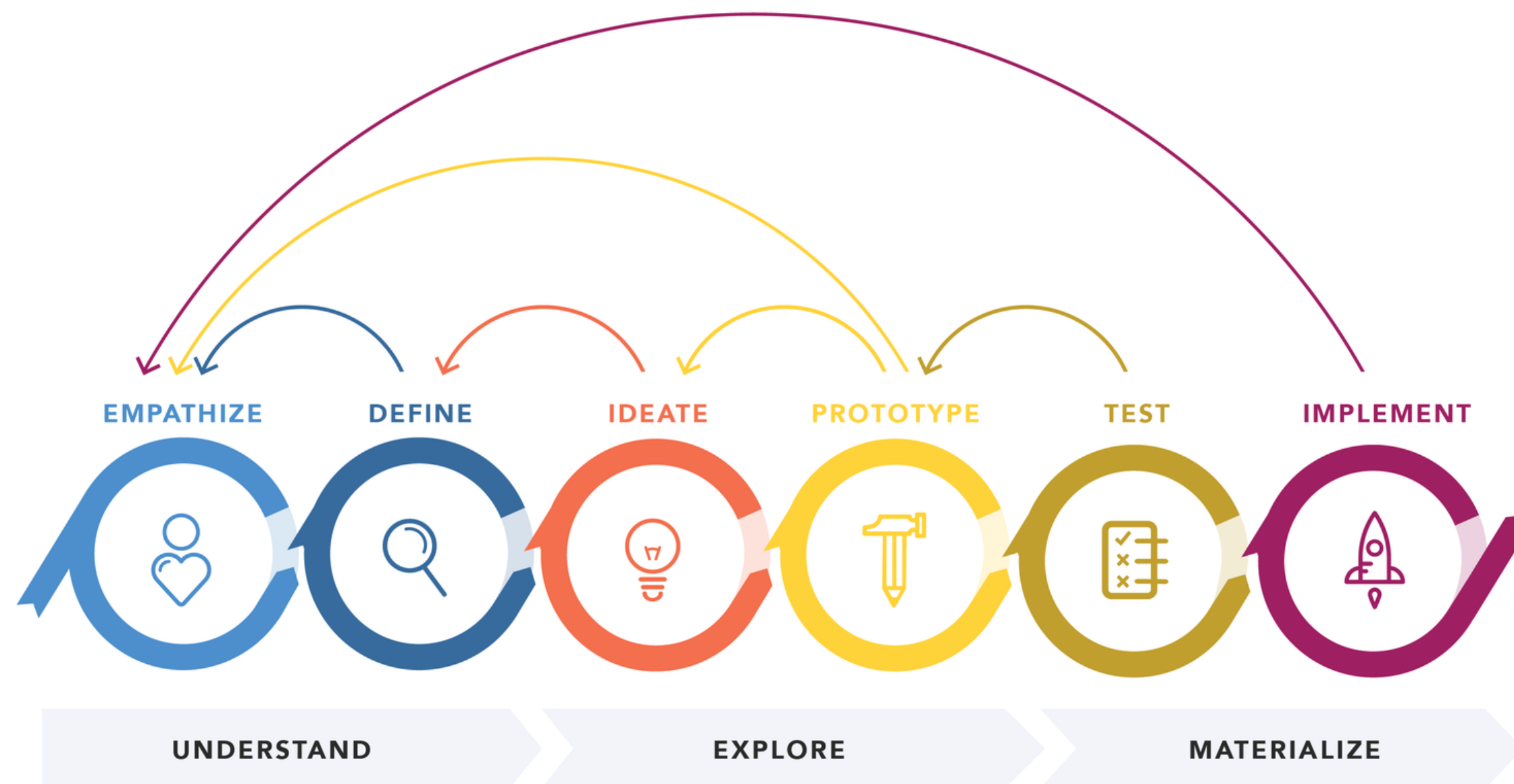


Pain



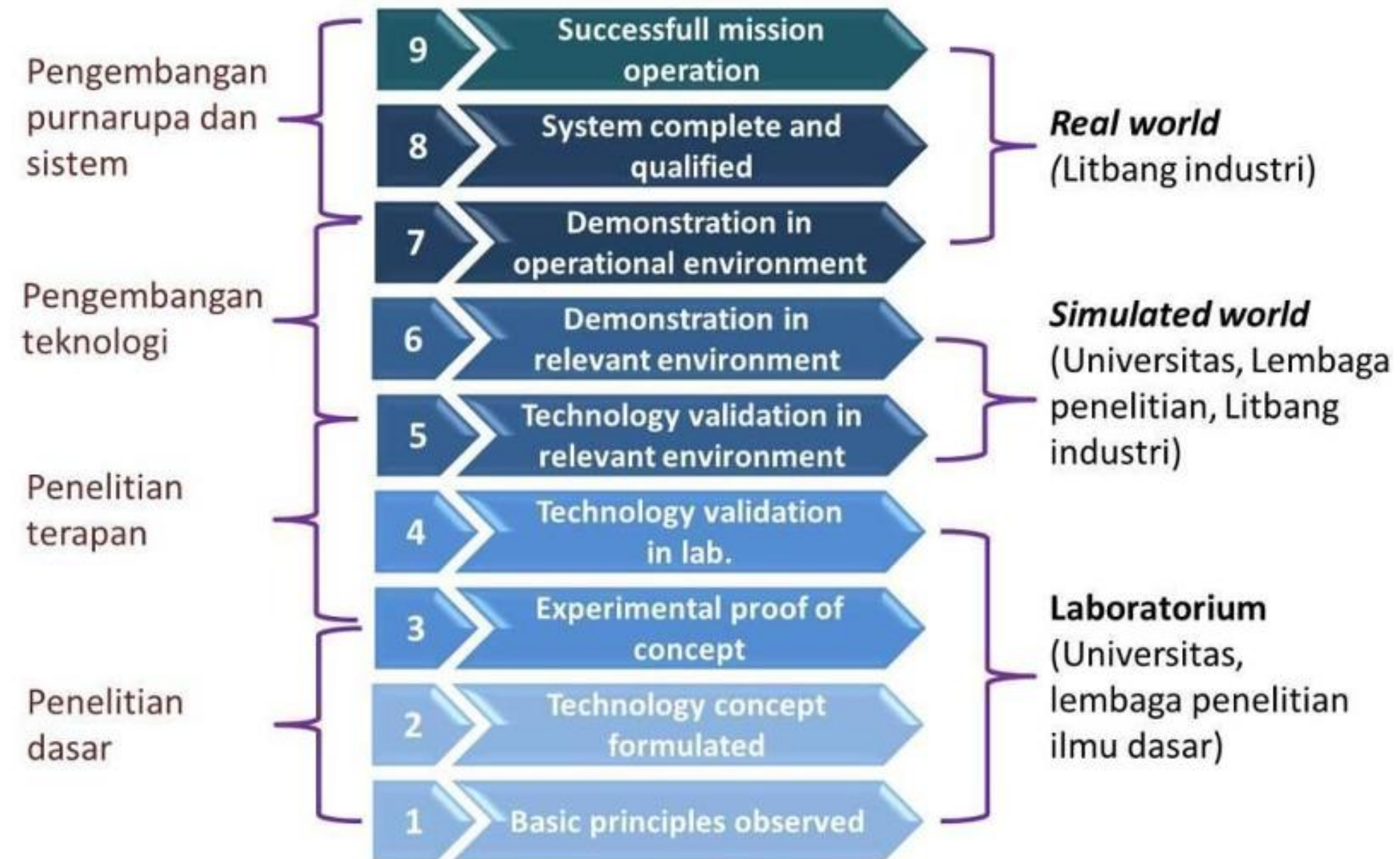
Inkubasi Teknologi (6)

Framework 3. Design Thinking



Kemitraan Industri (1)

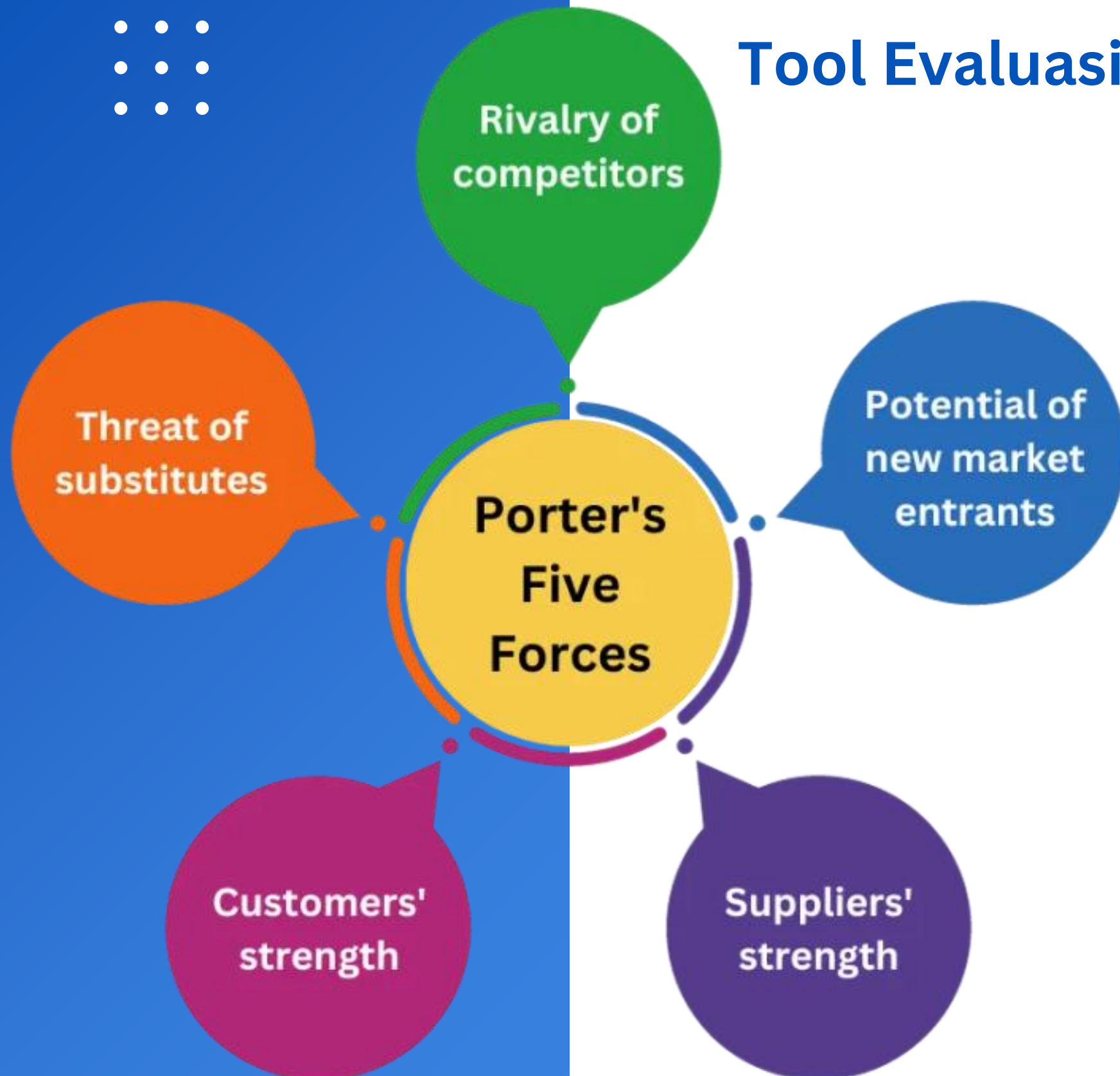
Tool Evaluasi Teknologi (1)



Technology Readiness Level (TRL) - NASA (1974)

Kemitraan Industri (2)

Tool Evaluasi Teknologi (2)



Porter's 5 Forces

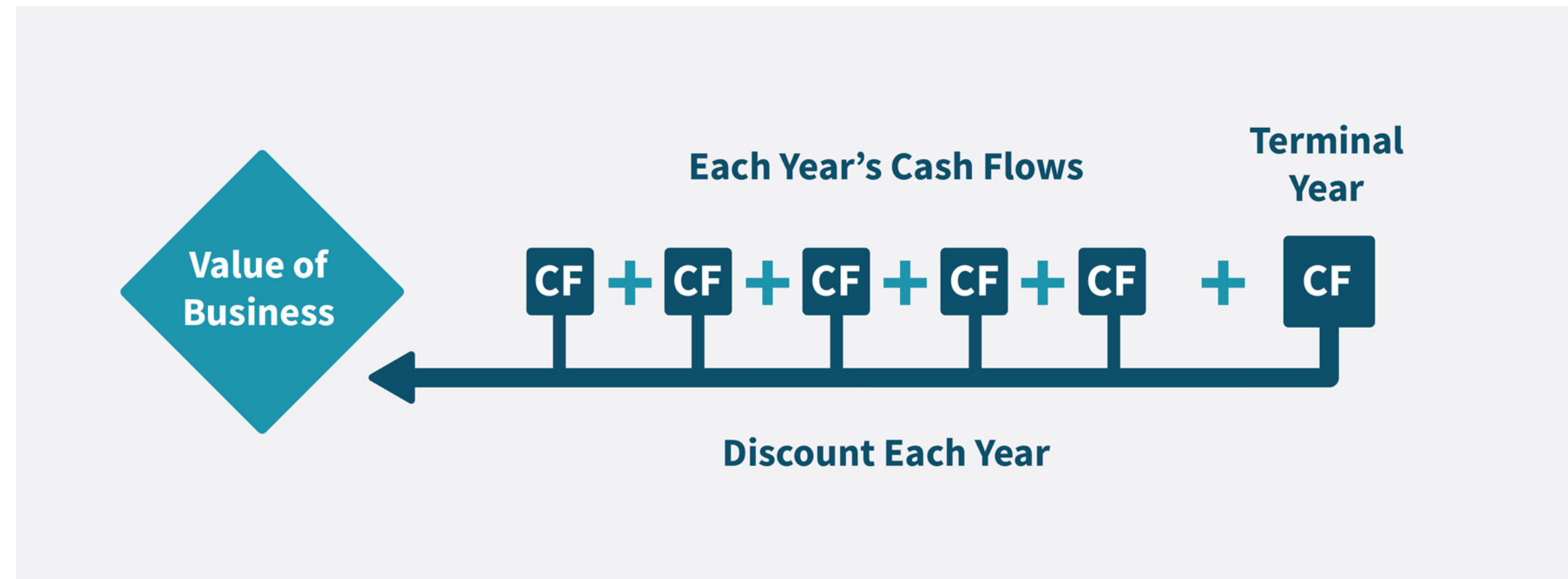


PESTLE

Kemitraan Industri (3)

Tool Evaluasi Teknologi (3)

Discounted Cash Flow (DCF) – Valuasi Income Based



Nilai yang diperlukan untuk dasar negosiasi

- Net Present Value (NPV)
- Estimasi Nilai Lisensi & Royalti (NPV x rule of thumb 25%)
- IRR
- RoI
- PBP



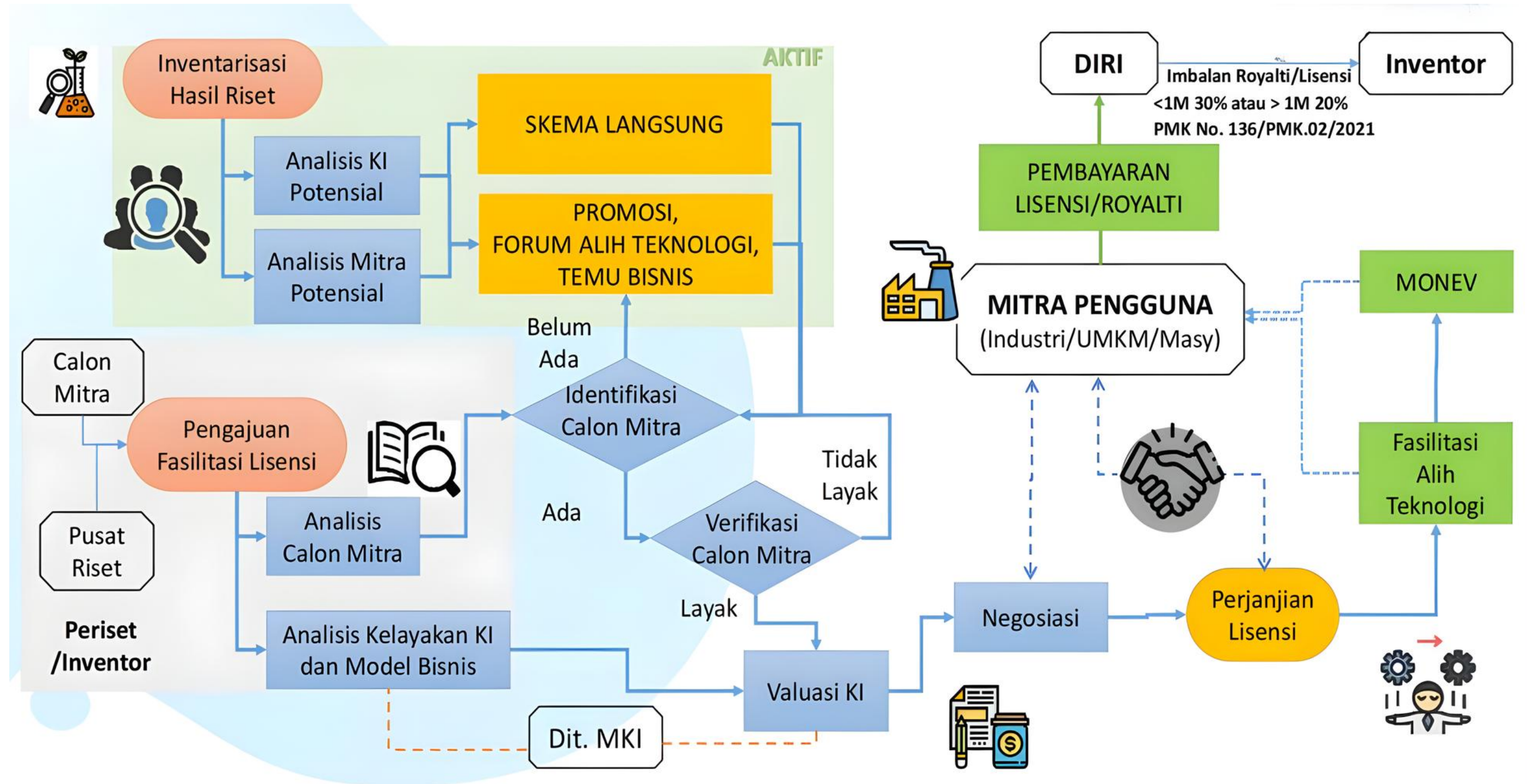
Kemitraan Industri (4)

Evaluasi Mitra untuk Kemitraan & Lisensi Teknologi

- **Relevansi Bidang Usaha** (Klasifikasi Baku Lapangan Usaha Indonesia – KBLI).
- **Skala Usaha** (Permenperin 64/2016):
 - Kecil: SDM ≤ 19 orang, modal $< \text{Rp. 1 miliar}$.
 - Menengah: > 20 orang, modal Rp. 1-15 miliar .
 - Besar: > 20 orang, modal $> \text{Rp. 15 miliar}$
- **Kemampuan & Kapasitas Produksi.**
- **Portofolio Bisnis.**
- **Dokumen Legalitas Perusahaan.**
- **On The Spot (OTS) survey.**

Kemitraan Industri (5)

Proses Lisensi Teknologi



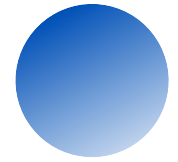
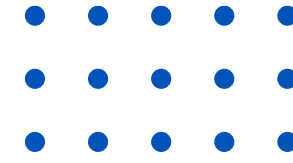
Kemitraan Industri (6)

Proses Lisensi Teknologi

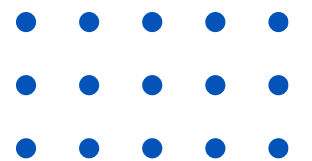


Tipe Lisensi

- Exclusive (1 licensee & licensor cannot use the patent).
- Sole (1 licensee & licensor may use the patent).
- Non-exclusive (Multiple licensees allowed).



Sesi 2: 13.00-13.45



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Pengembangan Kawasan IPTEK (1)

- **Jenis kawasan di BRIN:** KA, KSTE, KST, KS, KKI, KSL, KKE, KPP & KKB.
- Pengelolaan kawasan oleh **DIRI & SETTAMA BRIN**

Fungsi KST:

- Sebagai wahana untuk kerjasama Litbang berkelanjutan antara Pemerintah Pusat, Pemerintah Daerah, Perguruan Tinggi, Lembaga Litbang, dan industri
- Fasilitator penumbuhan perusahaan berbasis inovasi melalui inkubasi dan/atau Spin Off.
- Penyedia layanan bernilai tambah dan berkualitas kepada penerima layanan KST.



Pengembangan Kawasan IPTEK (2)



Layanan KST:

- Layanan Teknis.
- Layanan Pengembangan Teknologi.
- Layanan Inkubasi Bisnis Teknologi.
- Layanan Pendukung.

Pengembangan Kawasan IPTEK (3)



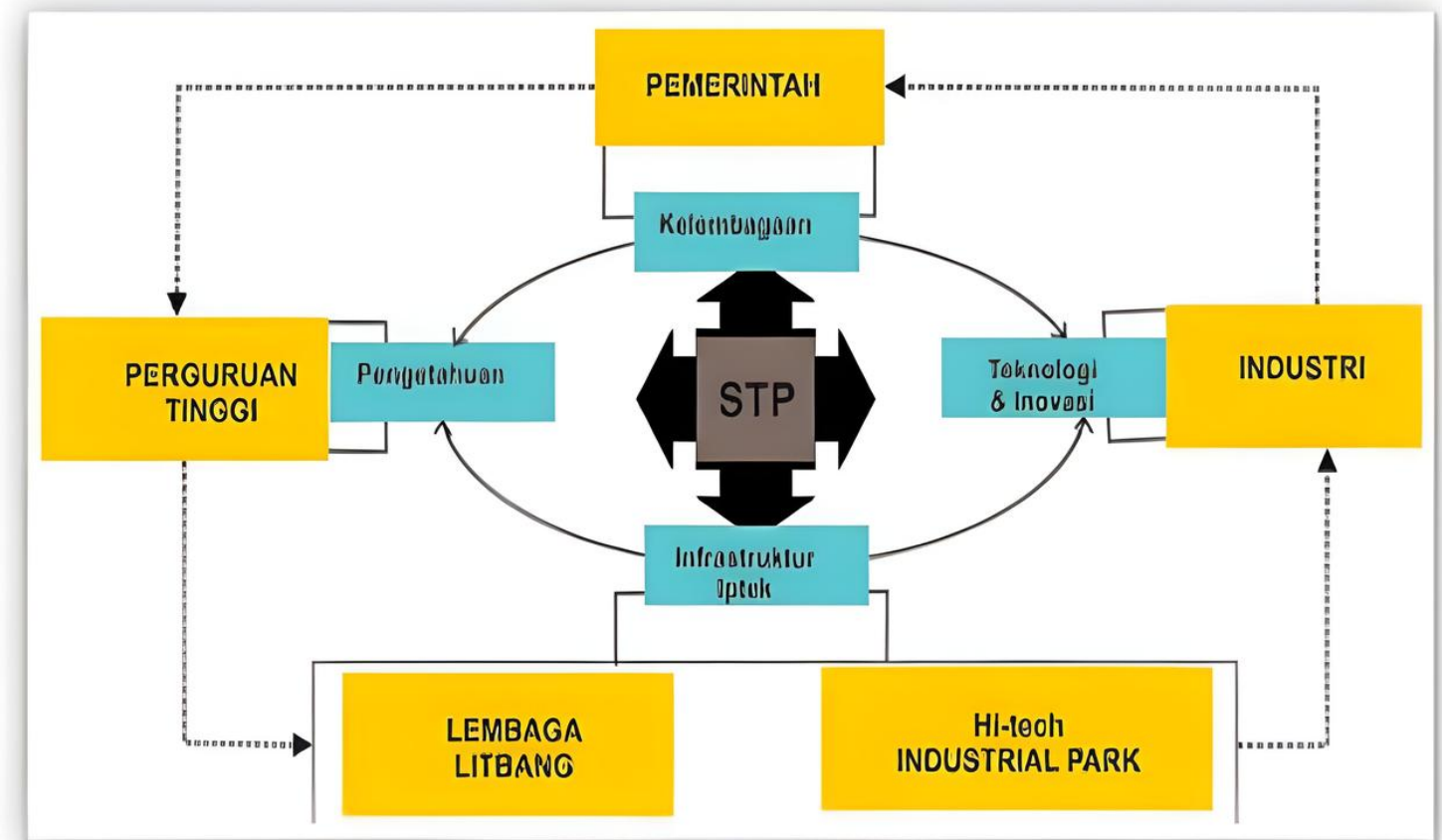
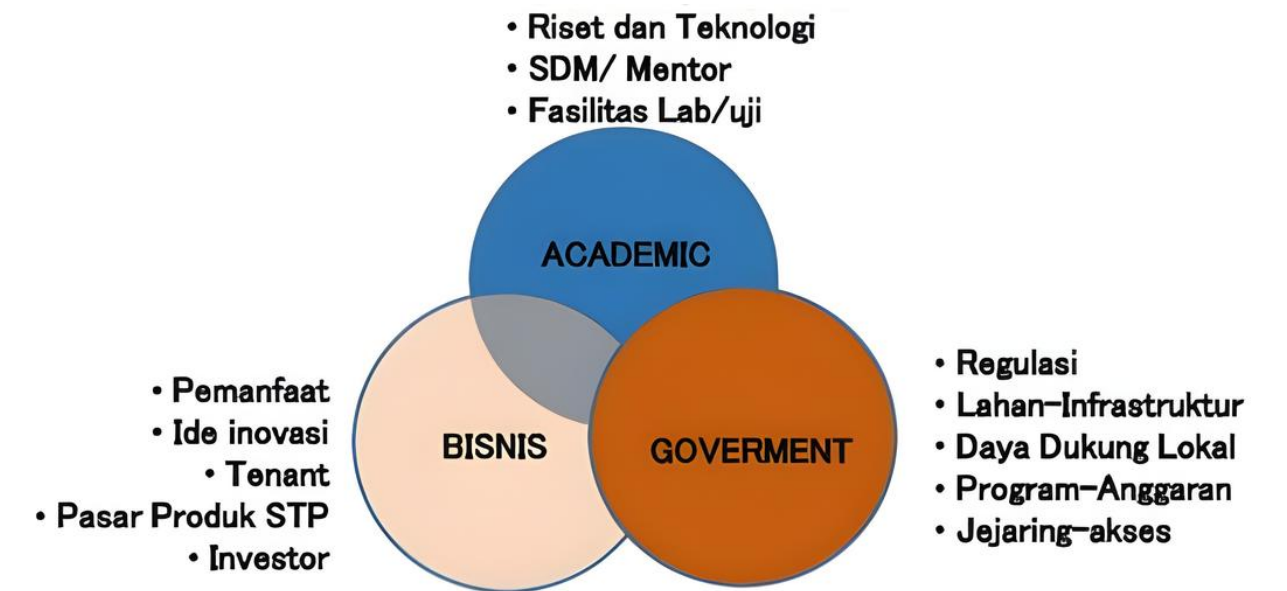
Unsur Utama KST/STP

Source of Innovation
(Sumber inovasi: Lembaga Penelitian, Perguruan Tinggi)

Humanware
(SDM: entrepreneur, pengusaha, pembina inkubasi, intermediator teknologi, industriawan)

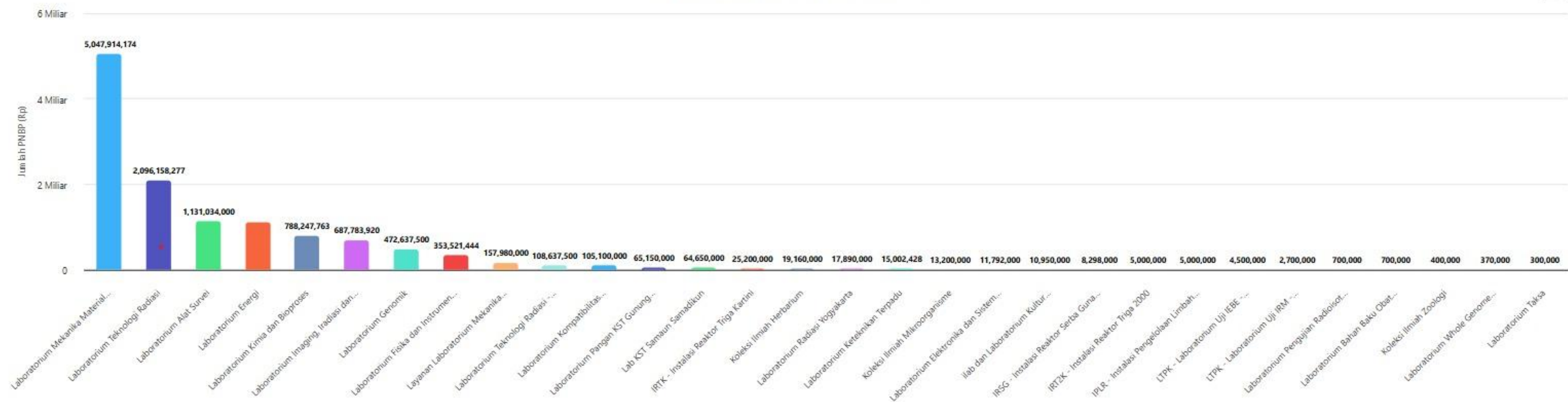
Software
(Perangkat lunak: Manajemen, Program, Pendanaan Inovasi, Jejaring)

Hardware
(Perangkat keras: Infrastruktur/Sarana Prasarana Utama dan Penunjang)



Pengembangan Kawasan IPTEK (4)

Perolehan PNBP per Laboratorium 2026

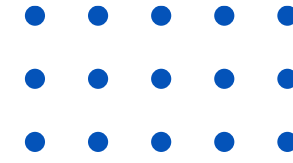




Q&A Time!

Quiz Time!





Terima kasih atas perhatiannya

Pelatihan JF API Batch 4

Speaker
Adityo Wicaksono

Date
23 Juli 2026

