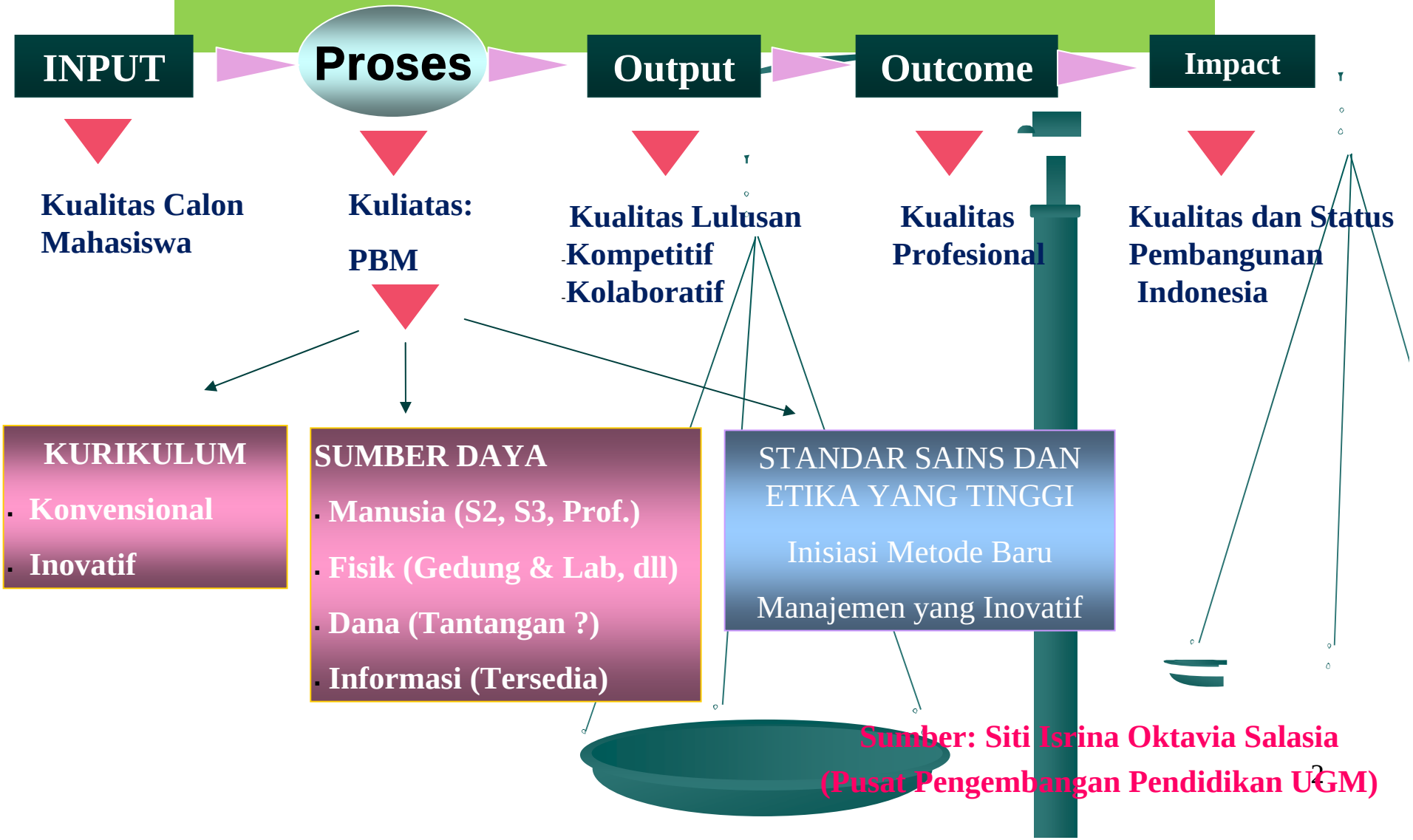
"Model *University Partnership* Menuju Institusi Akademik Kelas Dunia"

Deendarlianto
Jurusan Teknik Mesin & Industri
Fakultas Teknik, Universitas Gadjah Mada

PROSES PENDIDIKAN TINGGI



Sumber: Siti Isrina Oktavia Salasia
(Pusat Pengembangan Pendidikan UGM)

Outcome dari Lembaga akademik:

- Pengembangan *knowledge* untuk menaikkan *added value !*

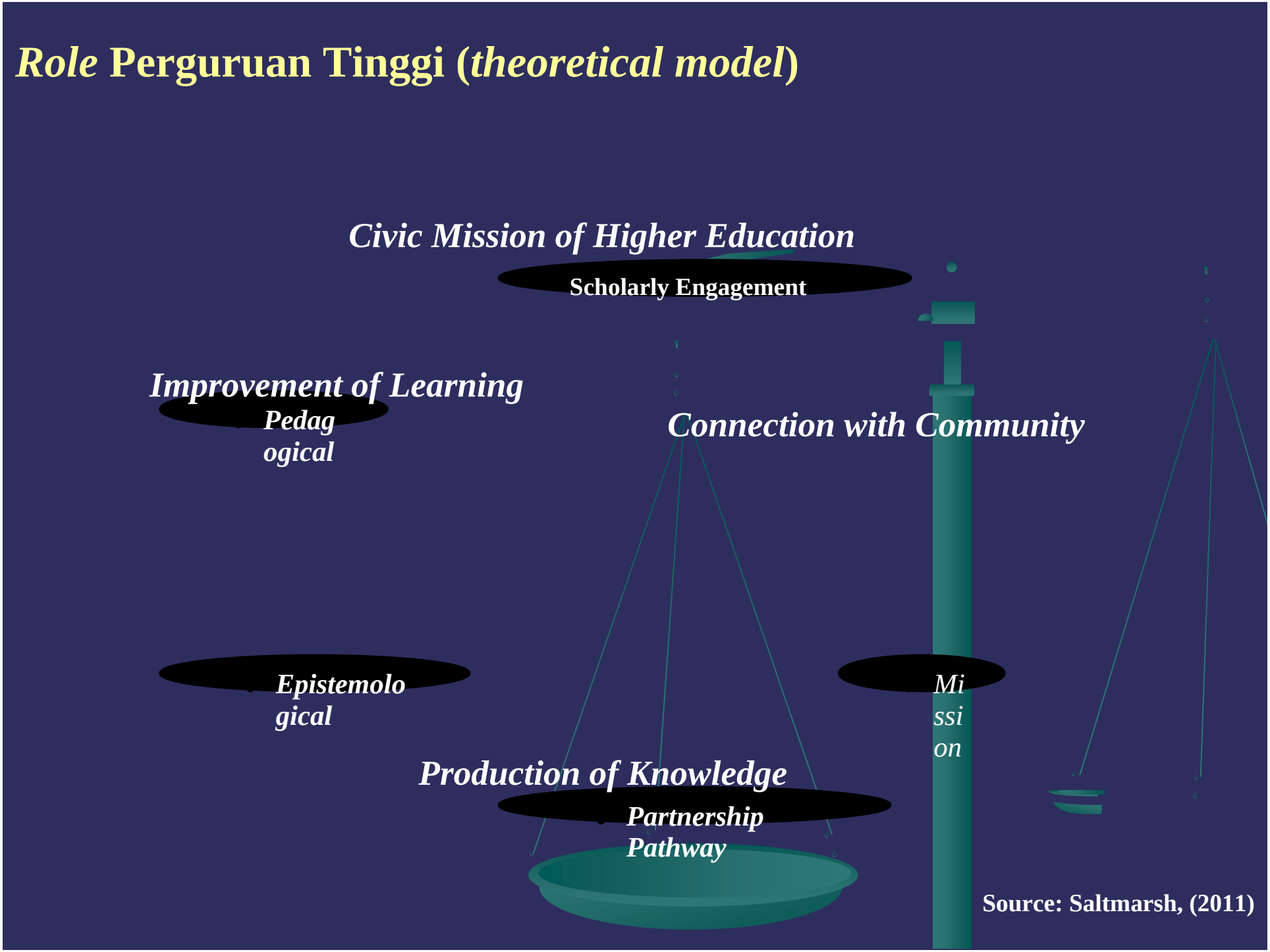
- High quality human resources

GDP increase !!!

Ketahanan nasional ?

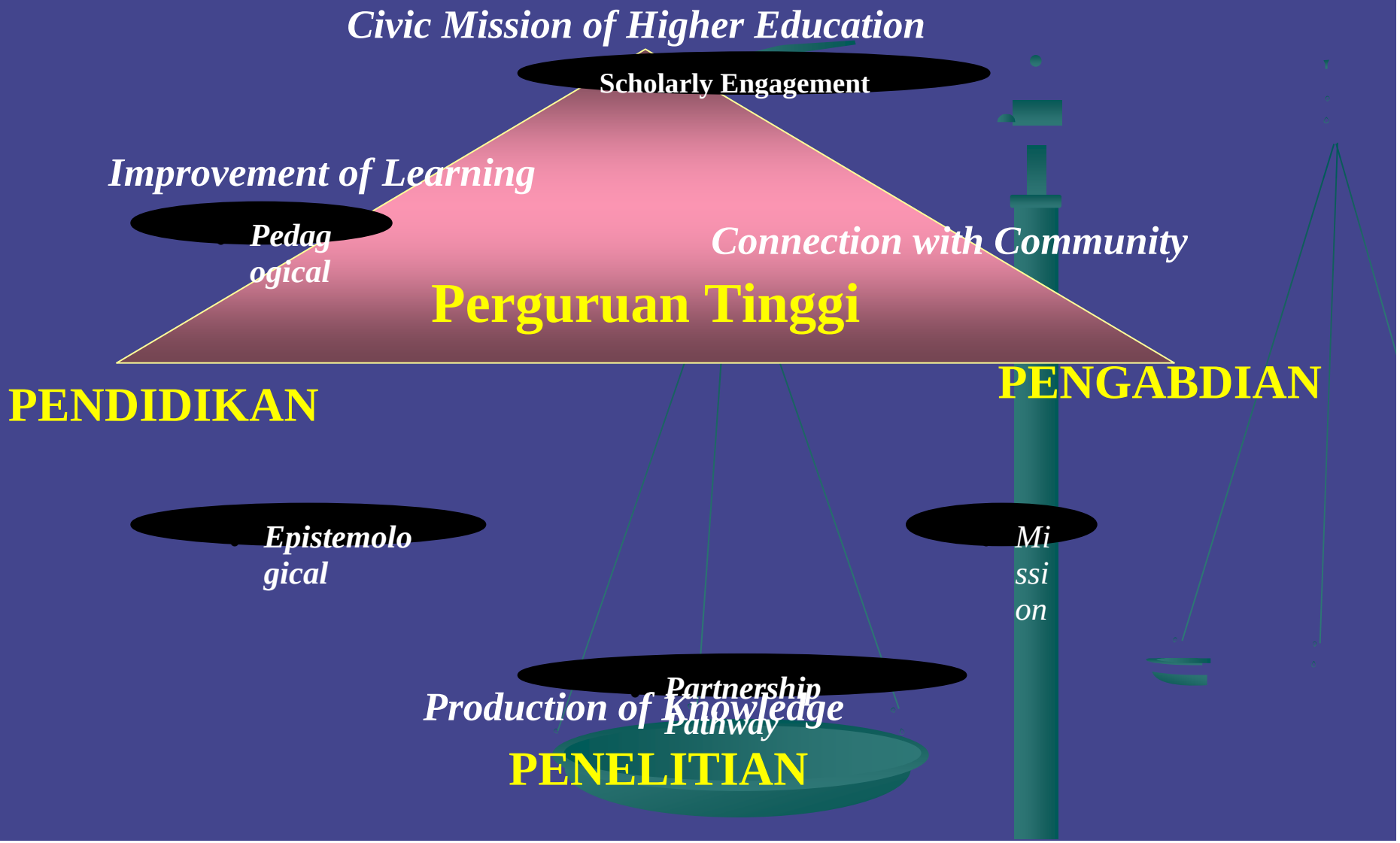
- Click to edit the
- Second Outline Level
- Second Outline Level
- Fourth Outline Level

Role Perguruan Tinggi (*theoretical model*)

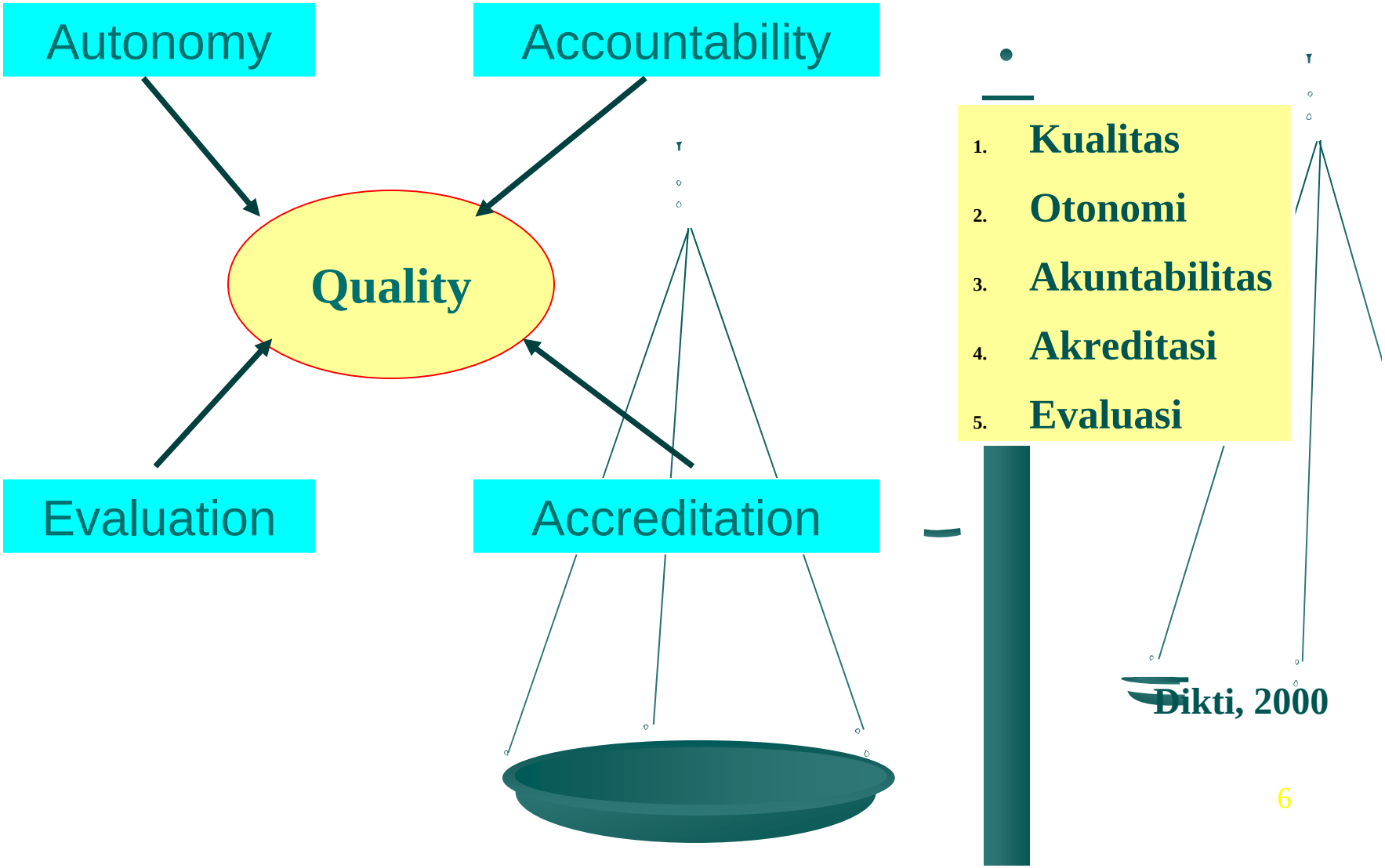


Source: Saltmarsh, (2011)

Role Perguruan Tinggi & Konsep Tri Darma PT



Paradigma Pendidikan Tinggi



1. **Kualitas**
2. **Otonomi**
3. **Akuntabilitas**
4. **Akreditasi**
5. **Evaluasi**

Dikti, 2000

Aspek Penilaian Lembaga Akademik

Asia Week

Reputasi akademik, rasio siswa baru / pelamar, jumlah dosen S2 dan S3, dana riset/dosen, karya tulis dosen, pengeluaran/siswa, akses internet

Shanghai Jiaotong

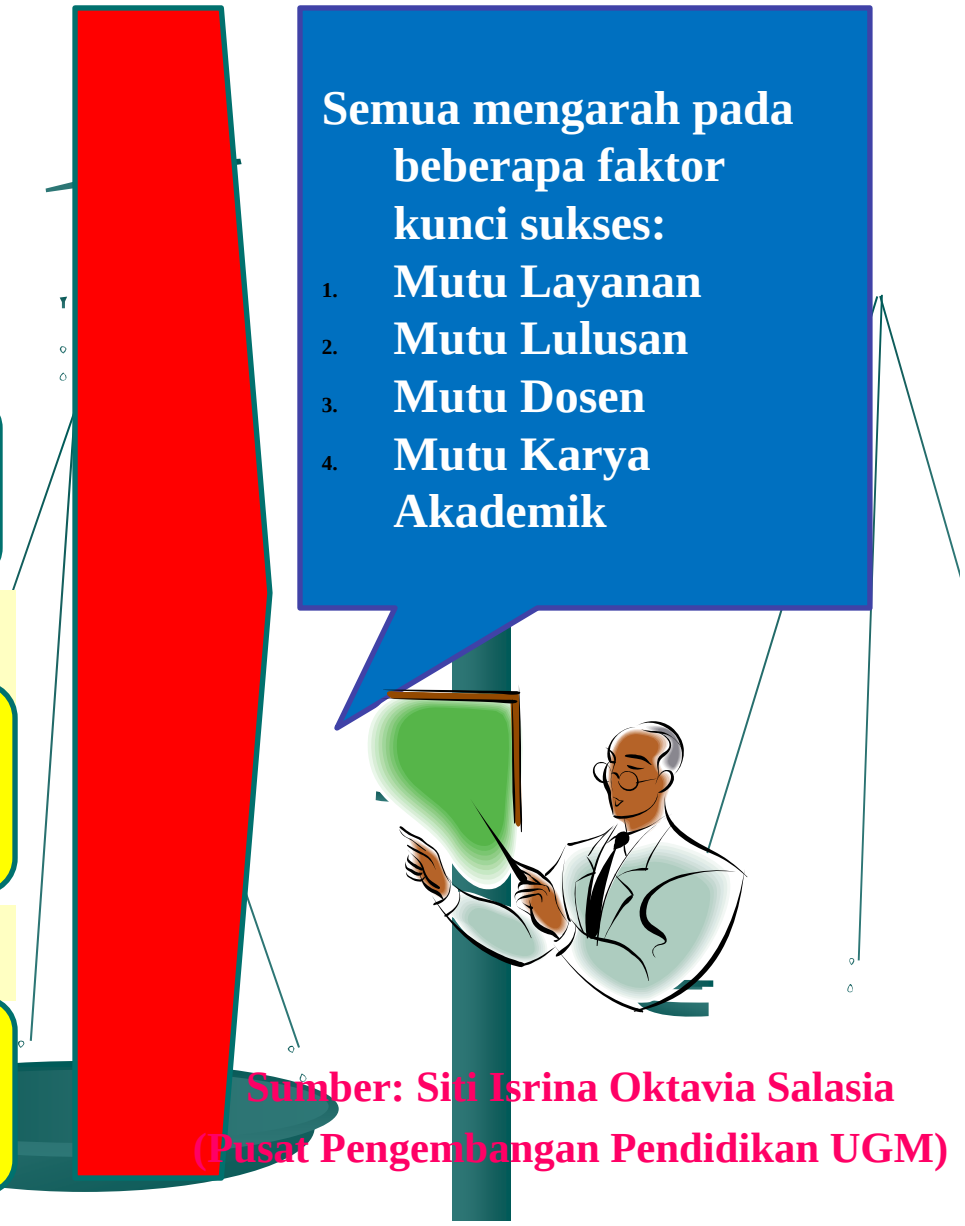
Jumlah alumni peraih awards , Jumlah pengajar peraih penghargaan , Jumlah penelitian yang terbit/sbg referensi , Jumlah lulusan

Times Higher Education

Penilaian ahli (40%) , Penilaian penerima kerja (10%) , Penilaian Dosen & siswa asing (10%) , Rasio Staff : Siswa (20%) , Karya tulis per Dosen (20%)

DIKTI

Penghargaan (30%), Student Life (20%)
Fasilitas (10%), Riset & Pengabdian Masy. (25%)
Kerjasama Internasional (15%)



Semua mengarah pada beberapa faktor kunci sukses:

1. **Mutu Layanan**
2. **Mutu Lulusan**
3. **Mutu Dosen**
4. **Mutu Karya Akademik**

Sumber: Siti Isrina Oktavia Salasia
(Pusat Pengembangan Pendidikan UGM)

VISI

- Pendidikan Unggul Berbasis Riset, Berbudaya, Mampu berkompetisi Internasional,
- Kepentingan dan Kemakmuran Bangsa

MISI:

- Pendidikan yang Berkualitas
- Lulusan yang Tangguh, Unggul, Bermoral, Bersaing Tingkat Internasional
- Penelitian untuk Kesejahteraan Masyarakat
- Menjalin Kerjasama Baik Dalam dan Luar Negeri
- Manajemen yang Transparan

Posisi PT Indonesia

- Jumlah Publikasi Internasional (*Scientific Journal*):
  Indonesia: 500 (th1997), 1000 (th2007)
  Thailand: 1000 (th1996), 5500 (th2007)
  Malaysia: 1000 (th1996), 3500 (th2007)

- Peringkat Perguruan Tinggi

No.	Indonesian University	QS TOP 200 ASIAN RANKING			
		Score 2010	Score 2011	2010	2011
1	University of Indonesia	68.60	67.80	50	50
2	Universitas Gadjah Mada	58.50	54.40	85	80
3	Airlangga University	52.50	52.10	109=	86
4	Bandung Institute of Technology	52.20	47.80	113=	98
5	Padjadjaran University	19.60	41.10	161=	128
6	Bogor Agricultural University	49.90	40.40	119	134
7	Diponegoro University	30.50	35.20	161=	151-160
8	Institut Teknologi Sepuluh Nopember	-	30.30	-	181-190
9	University of Brawijaya	-	24.50	-	201+
10	Universitas Negeri Sebelas Maret	-	18.40	-	201+
11	Parahyangan Catholic University		13.40		201+
12	Jember University		12.10		201+
13	Bina Nusantara University (BINUS)		12.10		201+
14	Sriwijaya University		11.00		201+
15	Padang State University		9.80		201+
16	Atma Jaya Catholic University Jakarta		9.20		201+
17	State University of Malang		6.60		201+
18	University of Muhammadiyah Malang		5.80		201+

?

Solusi:
Internal & External Networkings
(kerjasama)

We are ……

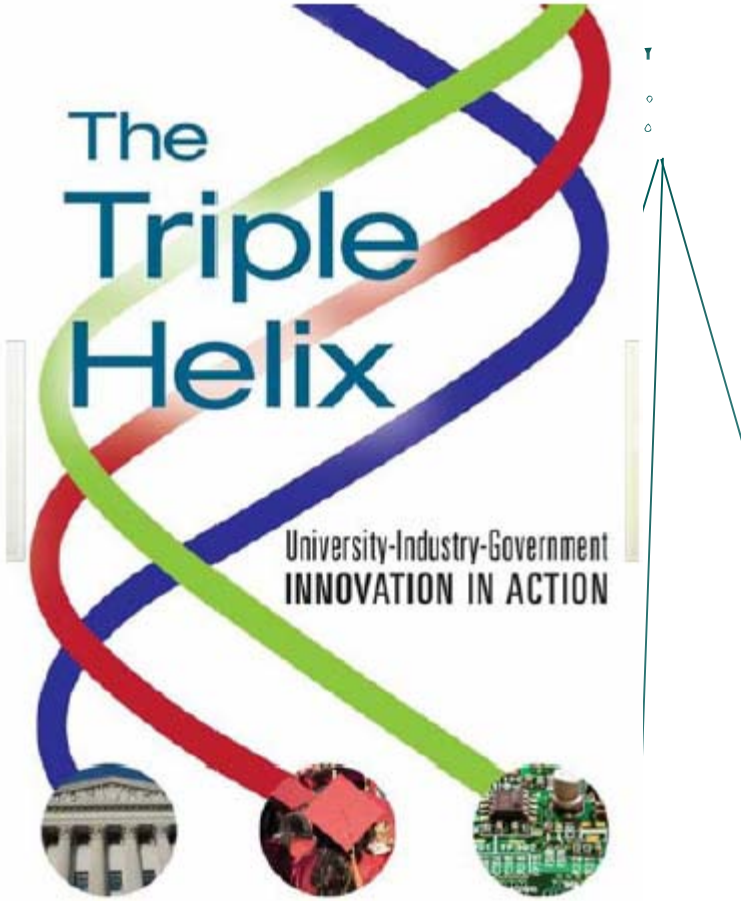
"……travelers together on this bright blue ball in nothingness"

-Carl Sandburg

Model *University Partnership*

- Model Individu

- Systemic model



Pentingnya Membangun *Network*

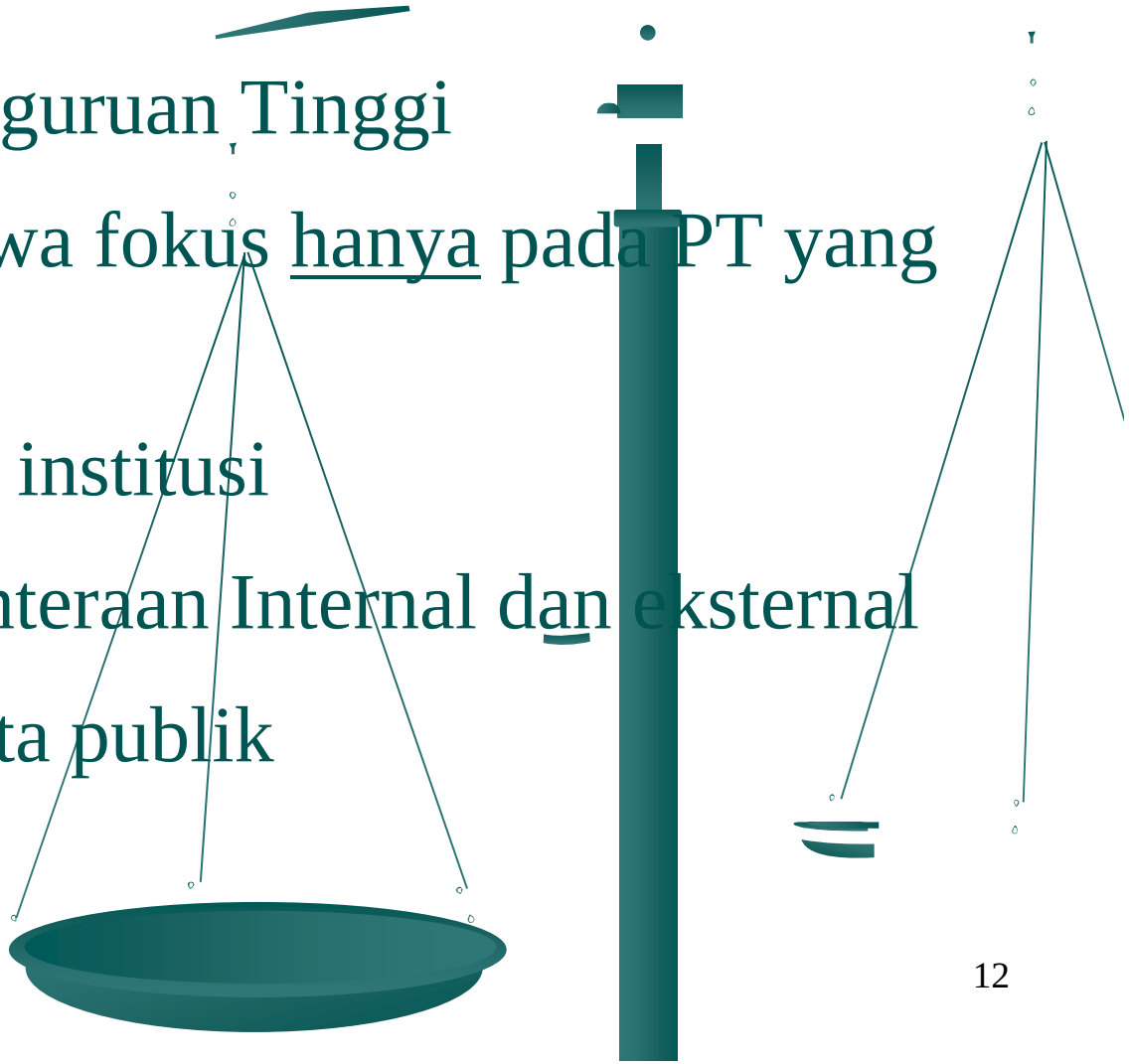
Kompetisi antar Perguruan Tinggi

Preferensi calon siswa fokus hanya pada PT yang terbaik saja

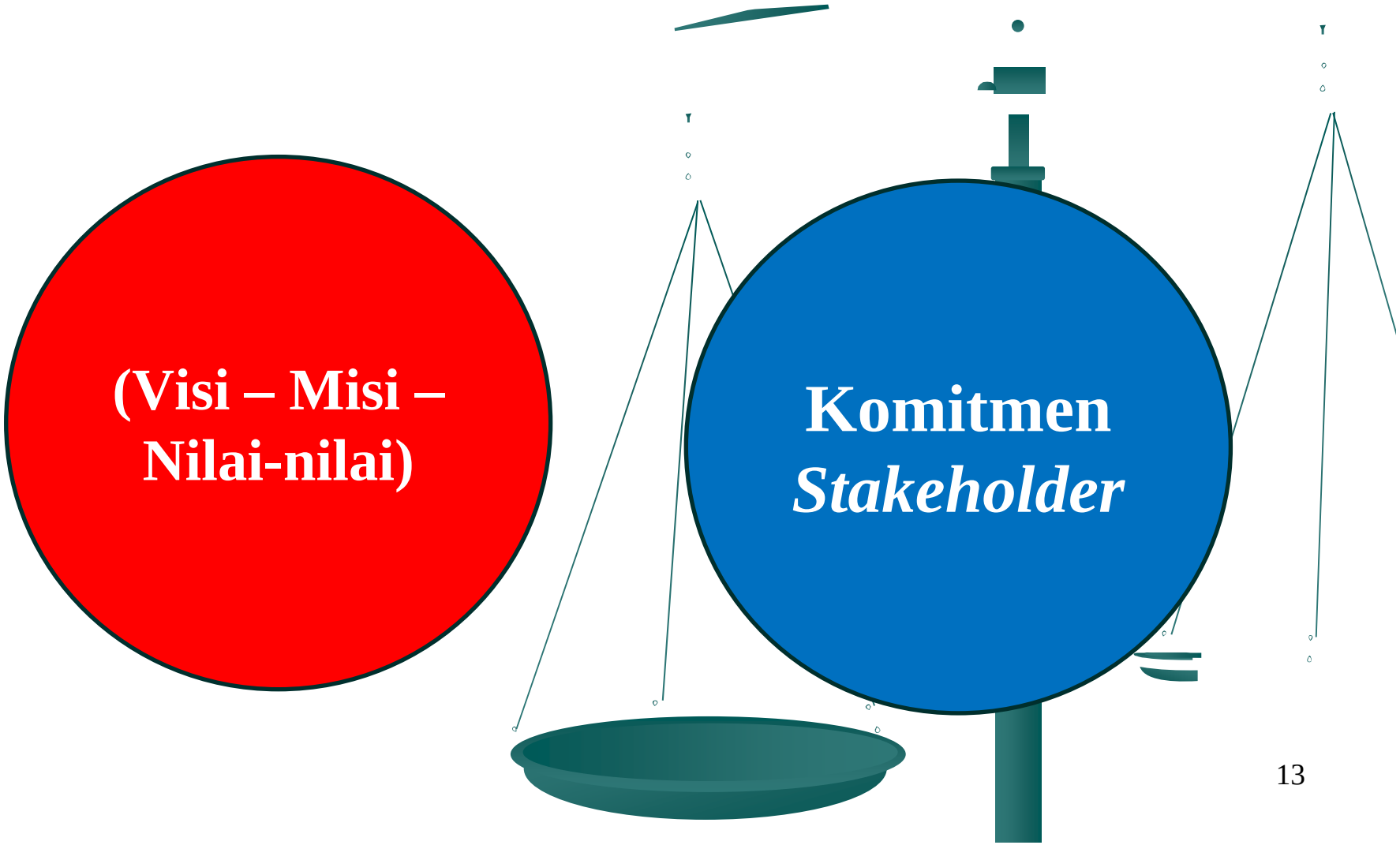
Peningkatan kinerja institusi

Peningkatan kesejahteraan Internal dan eksternal

Citra institusi di mata publik



Modal dasar dalam membangun *Networks*

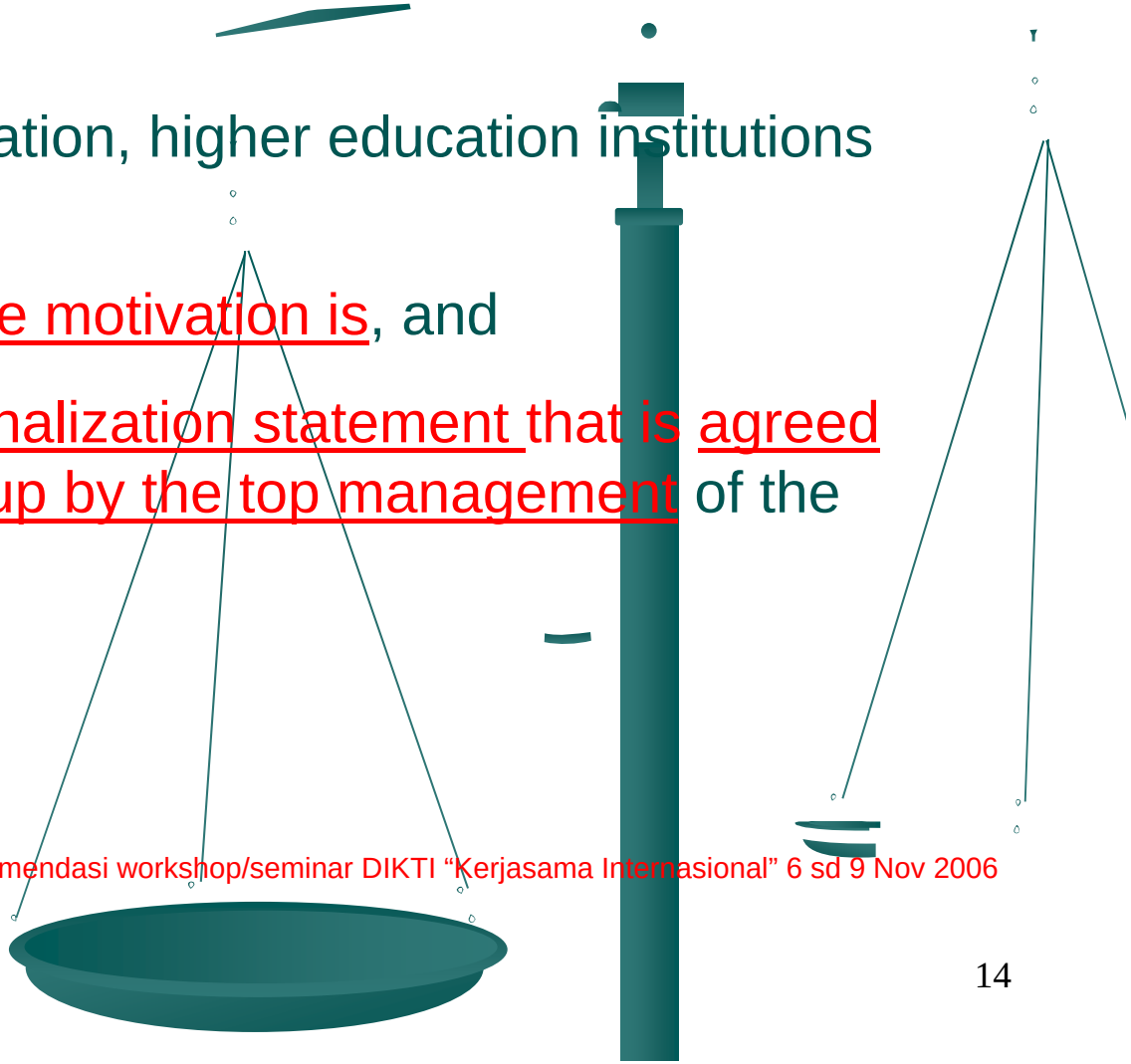


Langkah Awal Membangun Network

To start the internationalization, higher education institutions should :

First clearly define what the motivation is, and

They must have internationalization statement that is agreed and consistently followed up by the top management of the universities



Individual Competency Model

Institutional Change Model

Align Leadership

Guide Implementation

Customize the Change Strategy

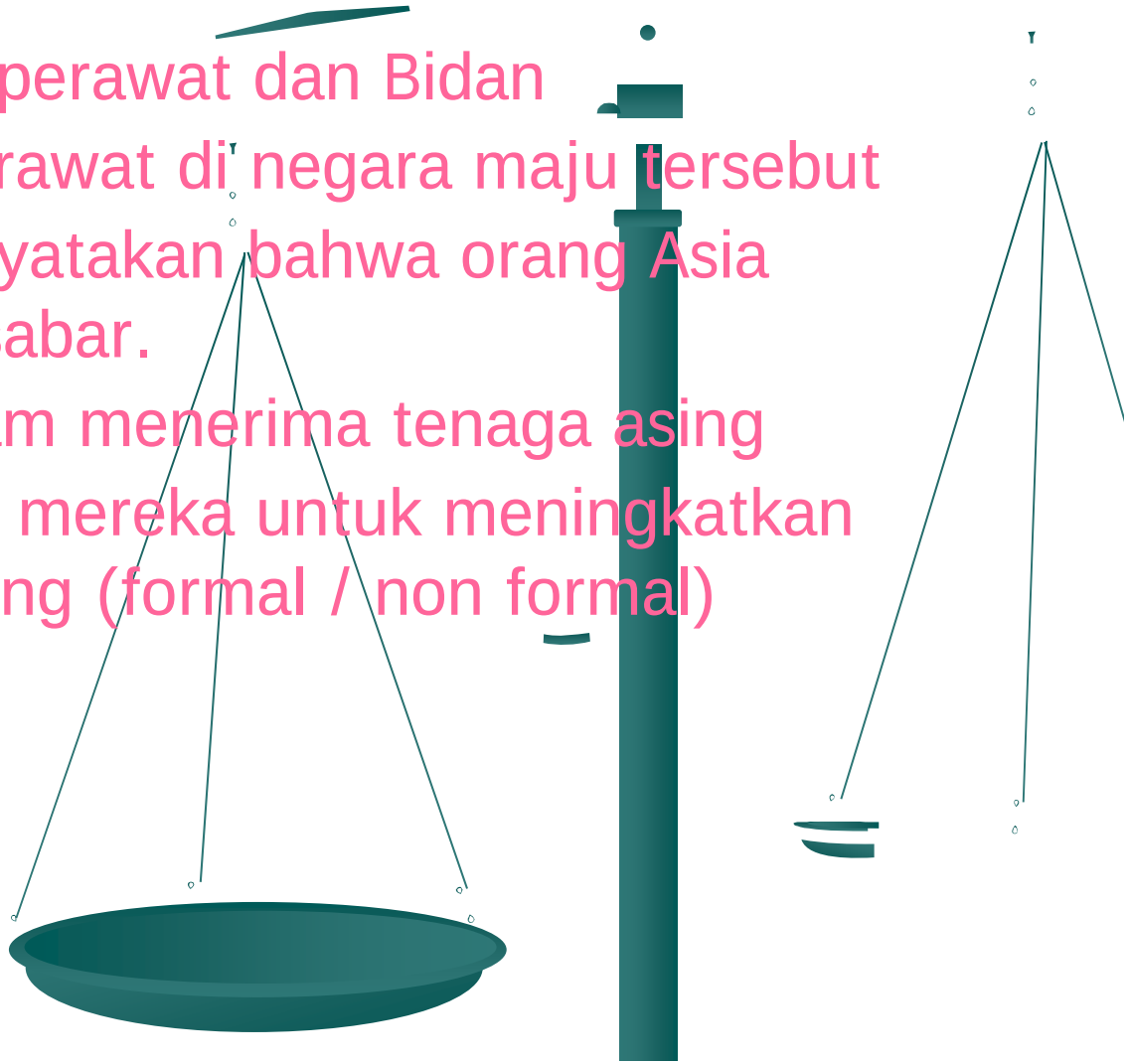
Activate Commitment

Assess & Institutionalize Change

Assess & Establish Roles & Team

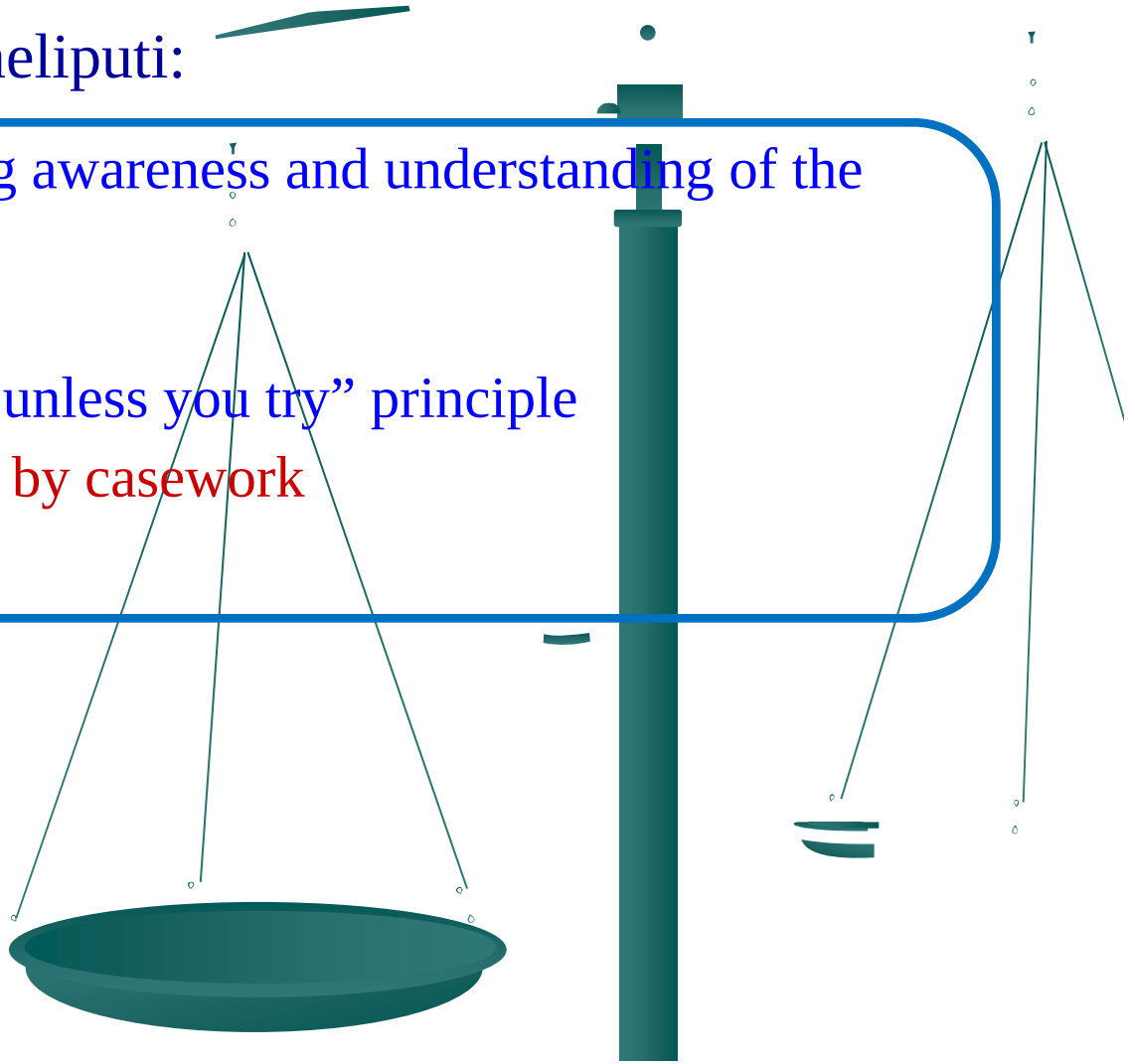
Peluang Pendidikan kesehatan (studi kasus Jerman & Jepang)

- Tingginya kebutuhan perawat dan Bidan
- Kurangnya lulusan perawat di negara maju tersebut
- Pandangan yang menyatakan bahwa orang Asia adalah pekerja yang sabar.
- Kesiapan mereka dalam menerima tenaga asing
- Kebijakan pemerintah mereka untuk meningkatkan jumlah mahasiswa asing (formal / non formal)



Hambatan utama (*a mutual international networks development)*

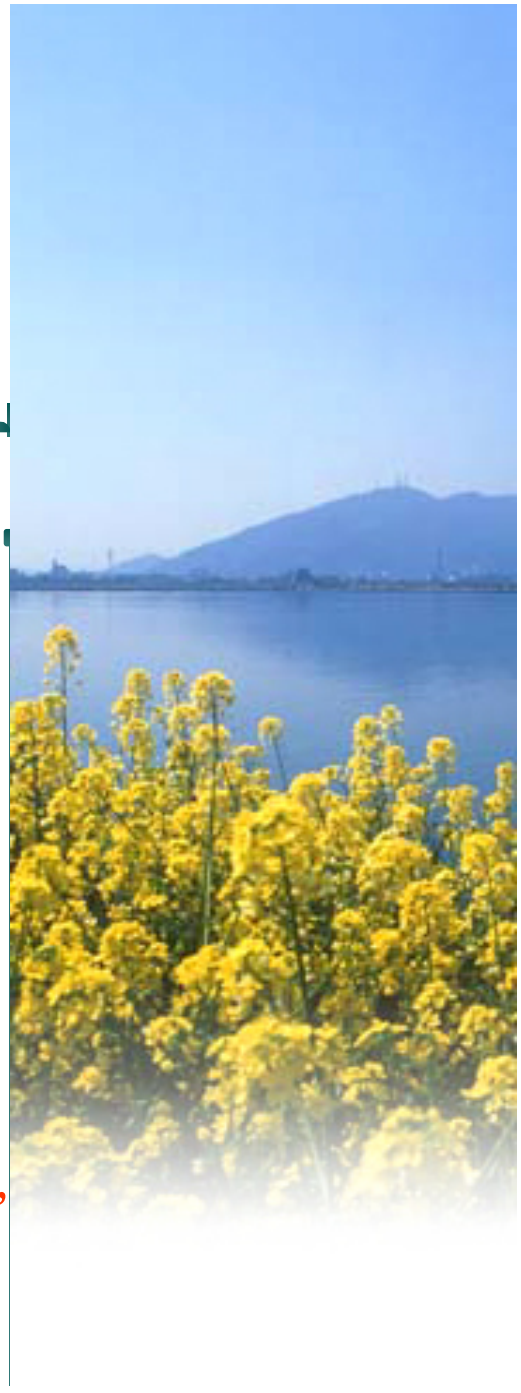
- Kemampuan Bahasa Asing serta adaptasi terhadap karakteristik lokal
- Persepsi personal yang meliputi:
  - A process of obtaining awareness and understanding of the environment
  - False perceptions
  - The “you don’t know unless you try” principle
  - Changing perceptions by casework
  - Reaching agreement
- Legal *Framework*



- Sumber daya yang meliputi:

  - *Capacities and capabilities*
  - *Training*
  - *Political will*
  - *Active cf. passive*
  - *Developing trust*
  - *Acceptance and denial of responsibility*
  - *Internal struggles*

Action is the foundational key to all success.
(Pablo Picasso)



Barangsiapa menempuh jalan yang padanya dia menuntut ilmu, maka Allah telah menuntunnya jalan ke surga. (HR Muslim)

Mentalitas yang perlu dikembangkan

Disiplin dan tepat waktu

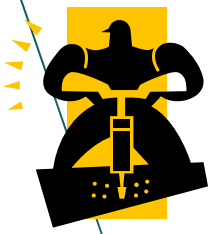
Proaktif

Profesional

Knowledge Sharing

Integritas

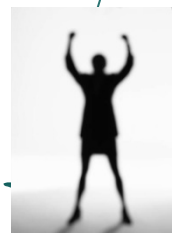
Team work



Pekerja keras

Leader & amanah

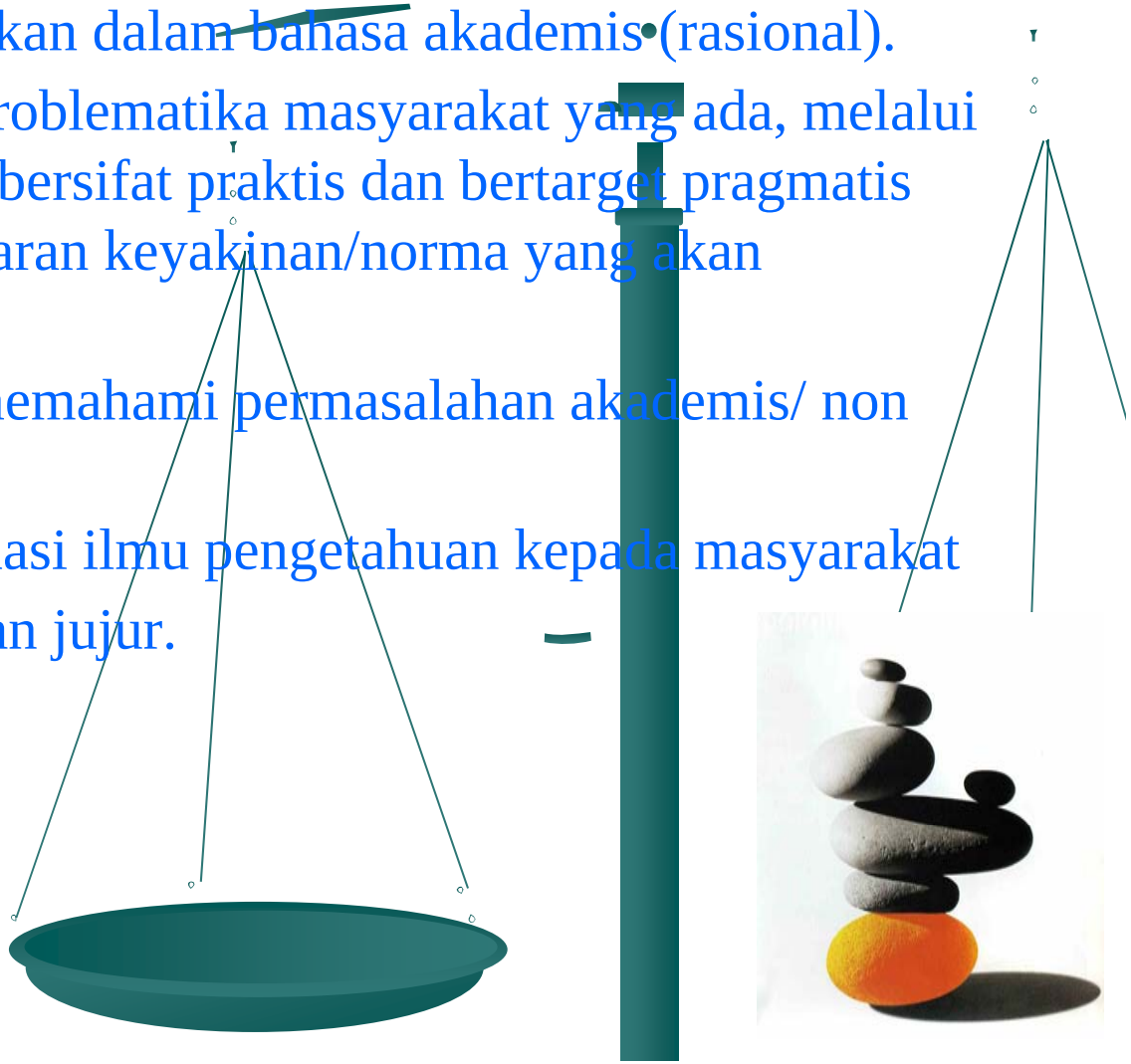
Berpenampilan baik



Positive thinking

Karakter yang perlu dikembangkan

- Memiliki keahlian tertentu sesuai dengan bidang yang dikuasainya
- Memahami realita kehidupan yang ada di tengah-tengah masyarakat & mampu memformulasikan dalam bahasa akademis (rasional).
- Mampu menyelesaikan problematika masyarakat yang ada, melalui konsep yang tidak hanya bersifat praktis dan bertarget pragmatis saja, tapi sampai pada tataran keyakinan/norma yang akan membentuk sistem.
- Berpikiran kritis dalam memahami permasalahan akademis/ non akademis.
- Niat tulus dalam diseminasi ilmu pengetahuan kepada masyarakat
- Lugas dalam bertindak dan jujur.

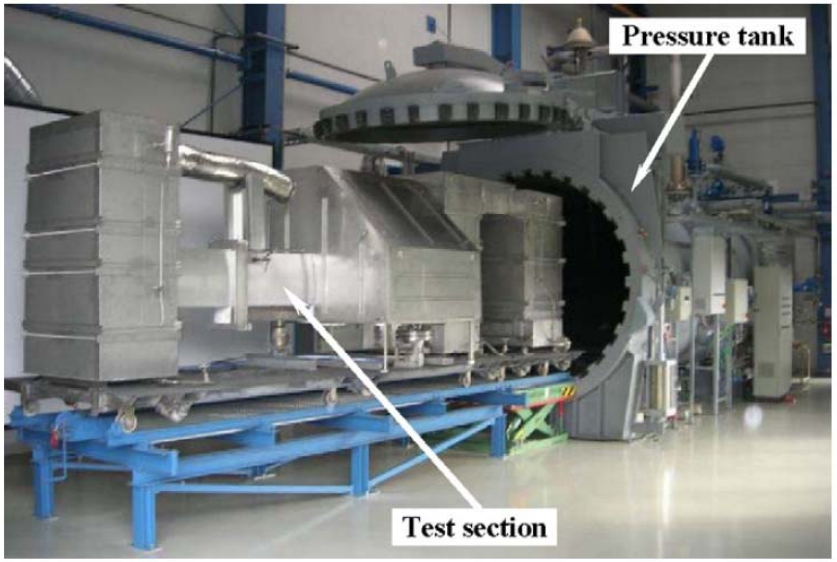


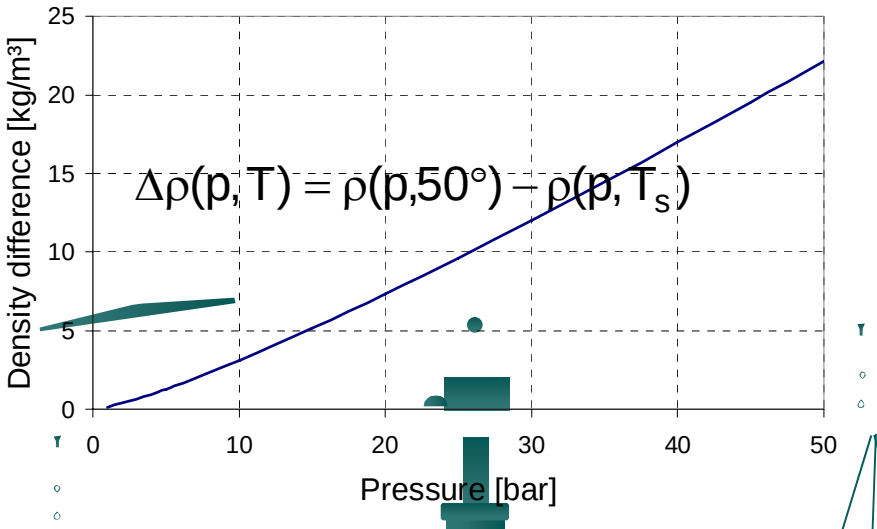
What have *we* done (at UGM and at HZDR), 2007 ~ present?

In the frame of:

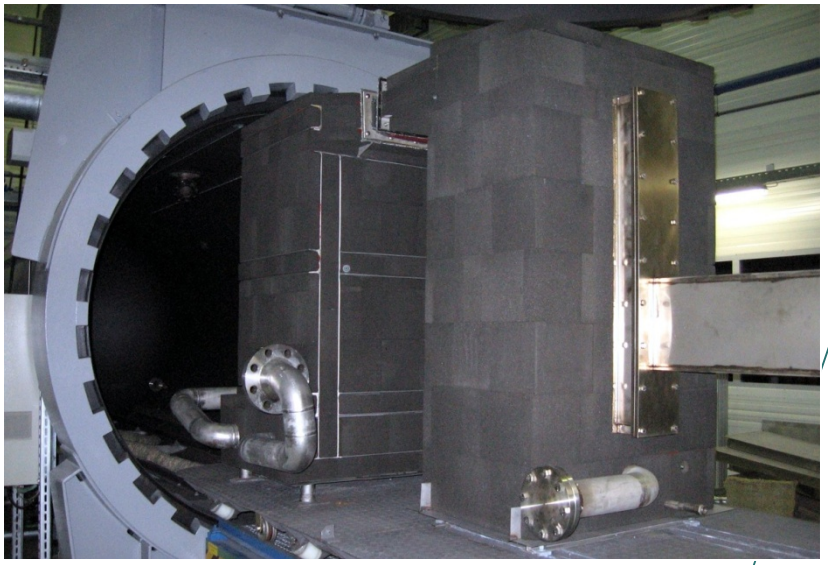
a. Alexander von Humboldt (AvH) Stiftung
b. TOPFLOW 2 & 3 Projects (BMWi)
c. Nurisp (European Commission)
d. Students partnership between UGM (JTMI) & HZDR, Germany. Future (ForSEE & HZDR)

Development an integrated solution and prediction model on the LOCA problems in real size /condition nuclear reactor from the view applied researches and basic science…..





Deendarlianto et al., 2011 (Nuclear Engineering & Design 241, *pp.3359-3372*)



Vallee, Deendarlianto, lucas, 2009 (Journal of Engineering for Turbine Gas and Power 131, *pp.022905-1, 8*)

Nuclear Engineering and Design 238 (2008) 3389–3402

Contents lists available at ScienceDirect

Nuclear Engineering and Design

journal homepage: www.elsevier.com/locate/nucengdes

Experimental study on the air/water counter-current flow limitation in a model of the hot leg of a pressurized water reactor

Deendarlianto [a,b], Christophe Vallée [a,*], Dirk Lucas [a], Matthias Beyer [a], Heiko Pietruske [a], Helmar Carl [a]

[a] Forschungszentrum Dresden-Rossendorf e.V., Institute of Safety Research, P.O. Box 510 119, D-01314 Dresden, Germany
[b] Department of Mechanical and Industrial

Annals of Nuclear Energy 39 (2012) 70–82

Contents lists available at SciVerse ScienceDirect

Annals of Nuclear Energy

journal homepage: www.elsevier.com/locate/anucene

Application of a new drag coefficient model at CFD-simulations on free surface flows relevant for the nuclear reactor safety analysis

Deendarlianto [a,b,*], Thomas Höhne [a], Pavel Apanasevich [a], Dirk Lucas [a], Christophe Vallée [a], Matthias Beye[illegible] [a]

[a] Helmholtz-Zentrum D
[b] Department of Mecha

Experimental Thermal and Fluid Science 34 (2010) 813–826

Contents lists available at ScienceDirect

Experimental Thermal and Fluid Science

journal homepage: www.elsevier.com/locate/etfs

The effects of surface tension on flooding in counter-current two-phase flow in an inclined tube

Deendarlianto [a,d,*], Akiharu Ousaka [b], Indarto [a], Akira Kariyasaki [c], Dirk Lucas [d], Karen Vierow [e], Christophe Vallee [d], Kevin Hogan [e]

[a] Department of Mechanical & Industrial Engineering, Faculty of Engineering, Gadjah Mada University, Jalan Grafika No.2 Yogyakarta 55281, Indonesia
[b] Department of Mechanical Engineering, The University of Tokushima, 2-1 Minami Josanjima, Tokushima 770-8506, Japan
[c] Department of Chemical Engineering, Fukuoka University, 8-19-1, Jyonan-ku, Fukuoka 814-0180, Japan
[d] Forschungszentrum Dresden-Rossendorf e.V., Institute of Safety Research, P.O. Box 510 119, D-01314 Dresden, Germany
[e] Department of Nuclear Engineering Texas A&M University, 129 Zachry Engineering Center, 3133 TAMU College Station, TX 77843-3133, USA

Nuclear Engineering and Design 243 (2012) 214–233

Contents lists available at SciVerse ScienceDirect

Nuclear Engineering and Design

journal homepage: www.elsevier.com/locate/nucengdes

Gas–liquid countercurrent two-phase flow in a PWR hot leg: A comprehensive research review

Deendarlianto[a,b,*], Thomas Höhne[a], Dirk Lucas[a], Karen Vierow[c]

[a] Helmholtz-Zentrum Dresden-Rossendorf e.V., Institute of Safety Research, P.O. Box 510 119, D-01314 Dresden, Germany
[b] Department of Mechanical and Industrial Engineering, Faculty of Engineering, Gadjah Mada University, Jalan Grafika No. 2, Yogyakarta 55281, Indonesia
[c] Department of Nuclear Engineering Texas A&M University, 129 Zachry Engineering Center, 3133 TAMU College Station, TX 77843-3133, USA

Nuclear Engineering and Design 241 (2011) 5138–5148

Contents lists available at SciVerse ScienceDirect

Nuclear Engineering and Design

journal homepage: www.elsevier.com/locate/nucengdes

CFD studies on the phenomena around counter-current flow limitations of gas/liquid two-phase flow in a model of a PWR hot leg

Deendarlianto[a,b,*], Thomas Höhne[a], Dirk Lucas[a], Christophe Vallée[a], Gustavo Adolfo Montoya Zabala[c]

sden, Germany
ın Grafika No. 2, Yogyakarta 55281, Indonesia
ela

International Journal of Heat and Fluid Flow 32 (2011) 1047–1056

Contents lists available at ScienceDirect

International Journal of Heat and Fluid Flow

journal homepage: www.elsevier.com/locate/ijhff

Numerical simulations of counter-current two-phase flow experiments in a PWR hot leg model using an interfacial area density model

Thomas Höhne*, Deendarlianto, Dirk Lucas

Helmholtz–Zentrum Dresden–Rossendorf (HZDR), Institute of Safety Research, P.O. Box 510 119, D-01314 Dresden, Germany

Terima kasih