

The background features a large blue shape on the right side, which is a trapezoid with a diagonal cut. On the left side, there is a solid orange triangle pointing towards the center. The blue area has a fine grid pattern.

# Perpustakaan di Era Milenial

Kuncoro Foe

# Presentation Outline

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- Tantangan big data dan machine learning di era informasi
- Karakteristik generasi milenial
- Peran perpustakaan sebagai sumber informasi dan sumber belajar
- Peran kepemimpinan dalam pengelolaan perpustakaan yang profesional

# Industrial Revolution 4.0

- Intelligent Manufacturing Program
- Intelligent Operation Program
- Internet of Things Sensor Network (Real Time)
- Precision Machine and Device
- Cyber-Physical Security Focus:
  - Process Modelling Simulation
  - IT Enabled Manufacturing
  - Robot to Robot Communication
  - Autonomy with Artificial Intelligence Machine Learning
  - Human-Machine Interaction
- Manufacturing Big Data (Cloud Computing and Big Data Analytics)

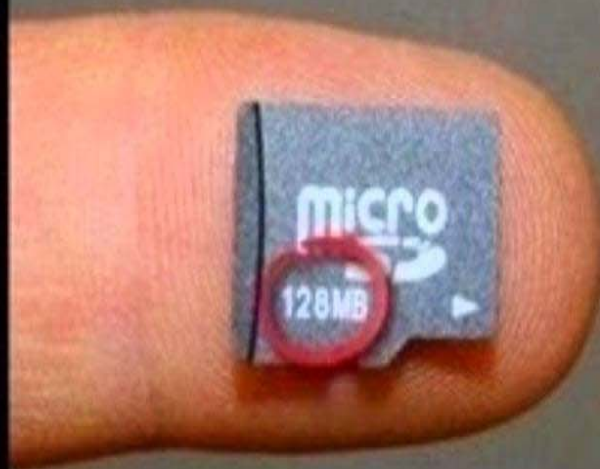
# Physical Size Smaller but Bigger Capacity



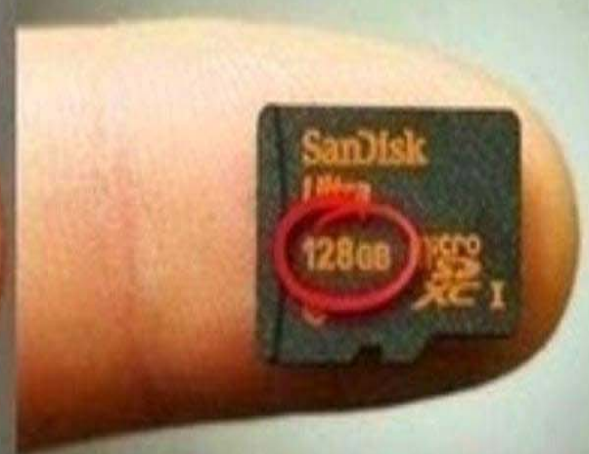
IBM 350 for IBM 305 RAMAC

5 Megabytes ... \$120,000

2005



2014



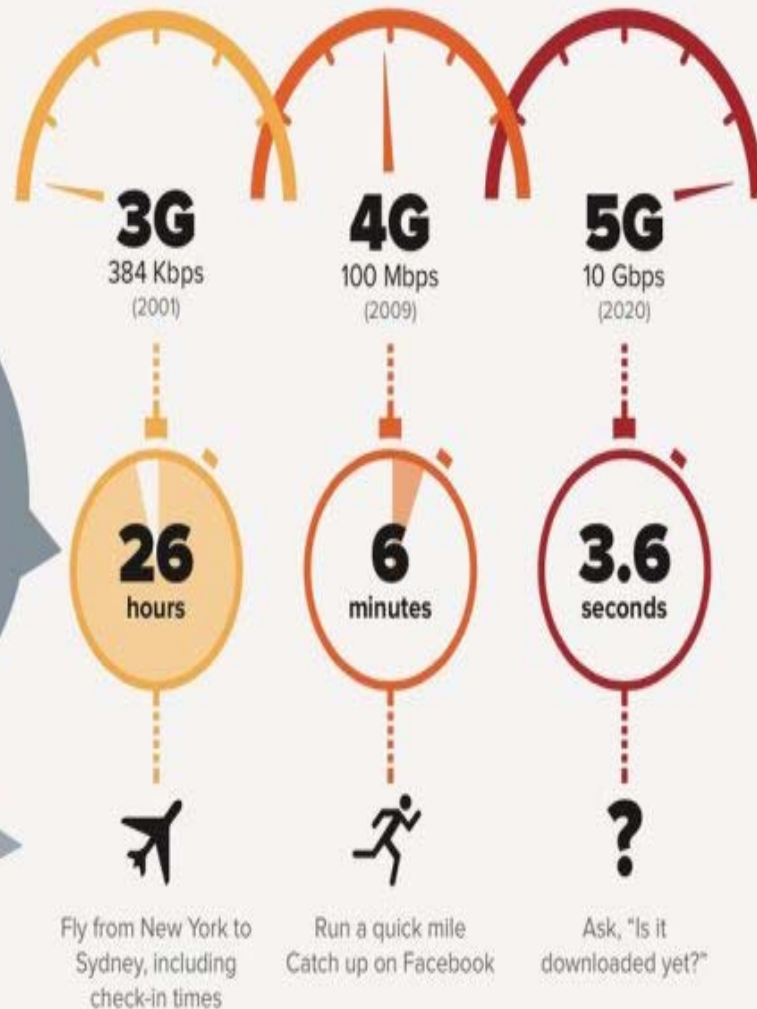
# Speed Revolution in Digital Communication



Network Type

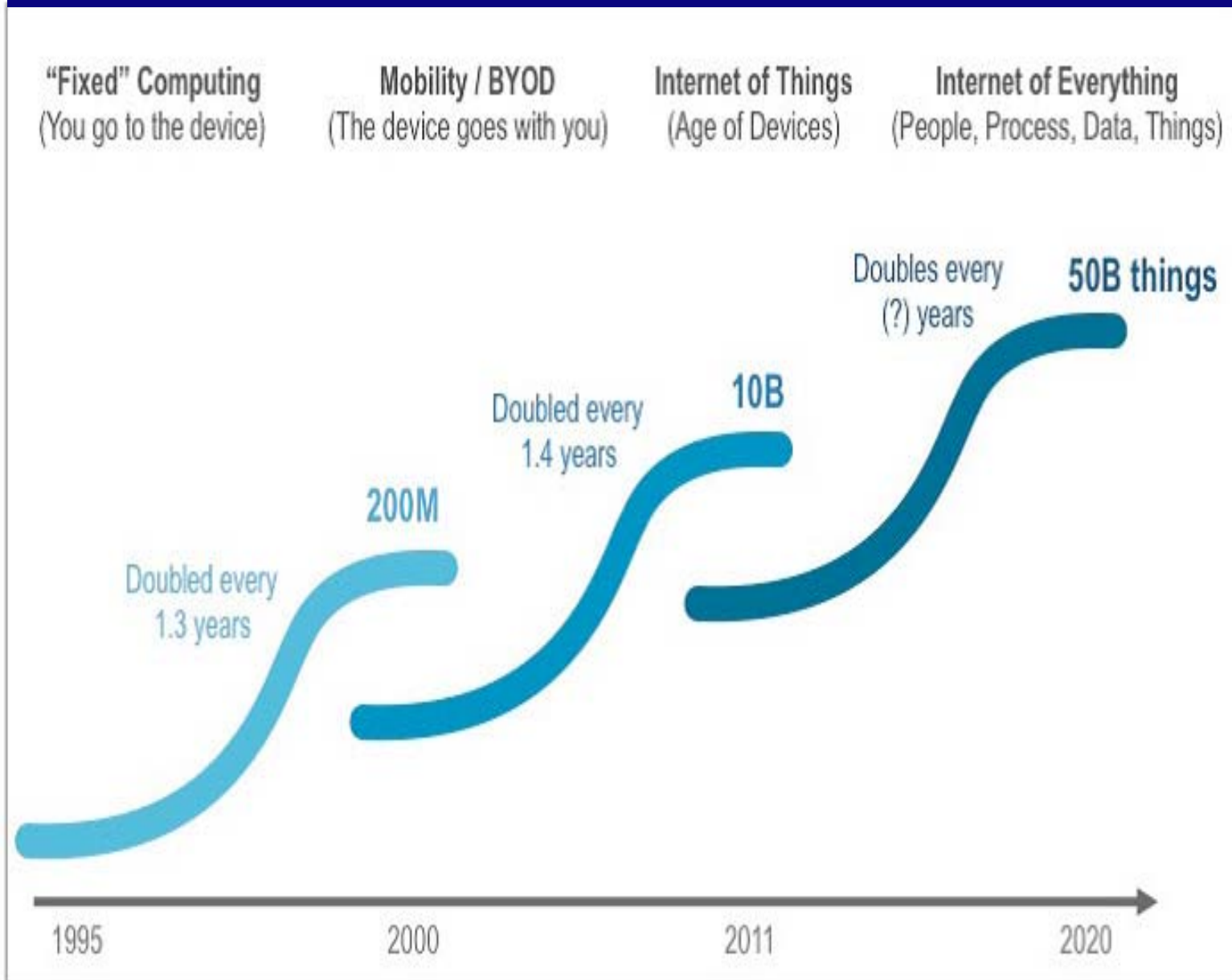
How long would it take to download the two-hour-long "Guardians of the Galaxy"?

What you could do while waiting



	2G	3G	4G
Icon			
Generation	2 <sup>ND</sup> GENERATION	3 <sup>RD</sup> GENERATION	4 <sup>TH</sup> GENERATION
Network Type	wireless network	wireless network	wireless network
Key Features	<ul style="list-style-type: none"> <li>Designed for voice</li> <li>Improved coverage and capacity</li> <li>First digital standards (GSM, CDMA)</li> </ul>	<ul style="list-style-type: none"> <li>Designed for voice with some data consideration (multimedia, text, internet)</li> <li>First mobile broadband</li> </ul>	<ul style="list-style-type: none"> <li>Designed primarily for data</li> <li>IP-based protocols (LTE)</li> <li>True mobile broadband</li> </ul>
Speed	64 Kbps	2,000 Kbps	100,000 Kbps
Activity			
Need for Speed	in Kbps per second		

# Growth of Number of Things Connected to the Internet



Source: Cisco IBSG, 2013

# Karakteristik Big Data

- Volume data terlalu banyak dan selalu bertambah seiring berjalannya waktu
- Pengkinian data sangat cepat (perekaman frekuensi kejadian secara cepat)
- Beragam variasi tipe data dengan kemajemukan format data (teks, gambar, video, audio)
- Dikumpulkan oleh mesin secara pasif tanpa keterlibatan manusia
- Akurasi (*veracity*) data semakin terjamin

# Tantangan Big Data

- Cara menginterpretasi data
- Membutuhkan ruang penyimpanan data yang besar
- Membutuhkan perangkat keras komputer dengan kemampuan besar
- Relevansi pengetahuan dan keterampilan manusia menurun dengan peran *machine learning* sebagai metode analisis untuk memperoleh *insights*



# Digital Economy (1)

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- Availability of human resource as the biggest asset
- Scope: Fintech (18% users in 2016) → 60% users in 2017, including Go-Pay (65%), Toko Cash (43%), Grab Pay (38%), Healthtech, Transportation
- Current: own Fintech (Djarum Group: blibli) → collaboration of top 10 bank in Indonesia with Fintech

# Digital Economy (2)

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- Start-up: baru, inovatif, memiliki unsur resiko
- Tips of success: combination of domain expert and IT expert, supported by infrastructure (Jawa vs. luar Jawa)
- Shortage of digital talent (programmer, computer scientists, data scientists, and other digital roles)

# 16 Skills for New Generation Jobs

*Future Leader According to Citi Bank Indonesia*

## Leadership Lessons

### Volatility

- Translate data into information
- Communicate early
- Ensure your intent is understood

### Uncertainty

- Get a fresh perspective
- Be flexible
- Glance back, look ahead

### Complexity

- Develop collaborative leaders
- Stop seeking permanent solutions
- Train tomorrow's heroes now

### Ambiguity

- Listen well
- Think Divergently
- Setup incremental dividends

# Dunia Mengalami Disrupsi

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- Simpler
- Cheaper
- More accessible
- Faster

Incumbent vs. New comers  
Industrial Revolution 4.0

# Human Resources in the Disruption Era

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- The Past (inability to escape the past)
- The Present (trend break)
- The Future (inability to invent the future, lack of innovation and creation)

Sharing economy, access of information, internet, smart city, new business model

# Common jobs that might not exist in 20 years

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- Cashiers → self-checkout machines
- Newspaper delivery → electronic reading devices
- Travel agents → travel websites
- Taxi drivers → self-driving cars
- Journalists → artificial intelligence software
- Social media expert → everyday individuals
- Telemarketers → robots
- Assembly line workers → robots

# How About This Profession ???

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- College Professors
- Librarians
- Bankers
- Accountants
- Insurance sales person
- Postmaster

Cumulative value creation is relatively low ?

# A Provoking Question

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## PUBLIC DISTRUST TOWARD FORMAL EDUCATION

- Millions of jobs are disappearing
- More creative careers are emerging
- In the US, 60% MOOC graduates start entering the job market



# Jobs that didn't exist 10 years ago

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- App designer
  - App developer
  - Big data analyst
  - Blogger
  - Data analytics specialist
  - CLO (chief listening officer)
  - Cloud computing services
  - Cloud services specialist
- 

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# KARAKTERISTIK GENERASI MILENIAL

# Mapping (1)

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- Mahasiswa ingin menjadi Pengusaha dan bukan Pegawai
- Indonesia (masyarakat yang menentukan wajah Indonesia di masa mendatang):
  - 56,7% masyarakat urban
  - 62,8% masyarakat kelas menengah
  - 34% generasi milenial (usia 18-37 tahun, kelahiran tahun 1981-1999), sebagai pembandingan: gen X (33%), baby boomers (11%)

# Mapping (2)

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- Lintas generasi:
- Baby boomers (lahir tahun 1946-1964)
- Gen X (lahir tahun 1965-1998), digital migrant
- Gen Y (milenial) lahir tahun 1981-1999
- Gen Z (lahir tahun 2000 dan sesudahnya), pencari 3C (Creative, Confidence, Connected)

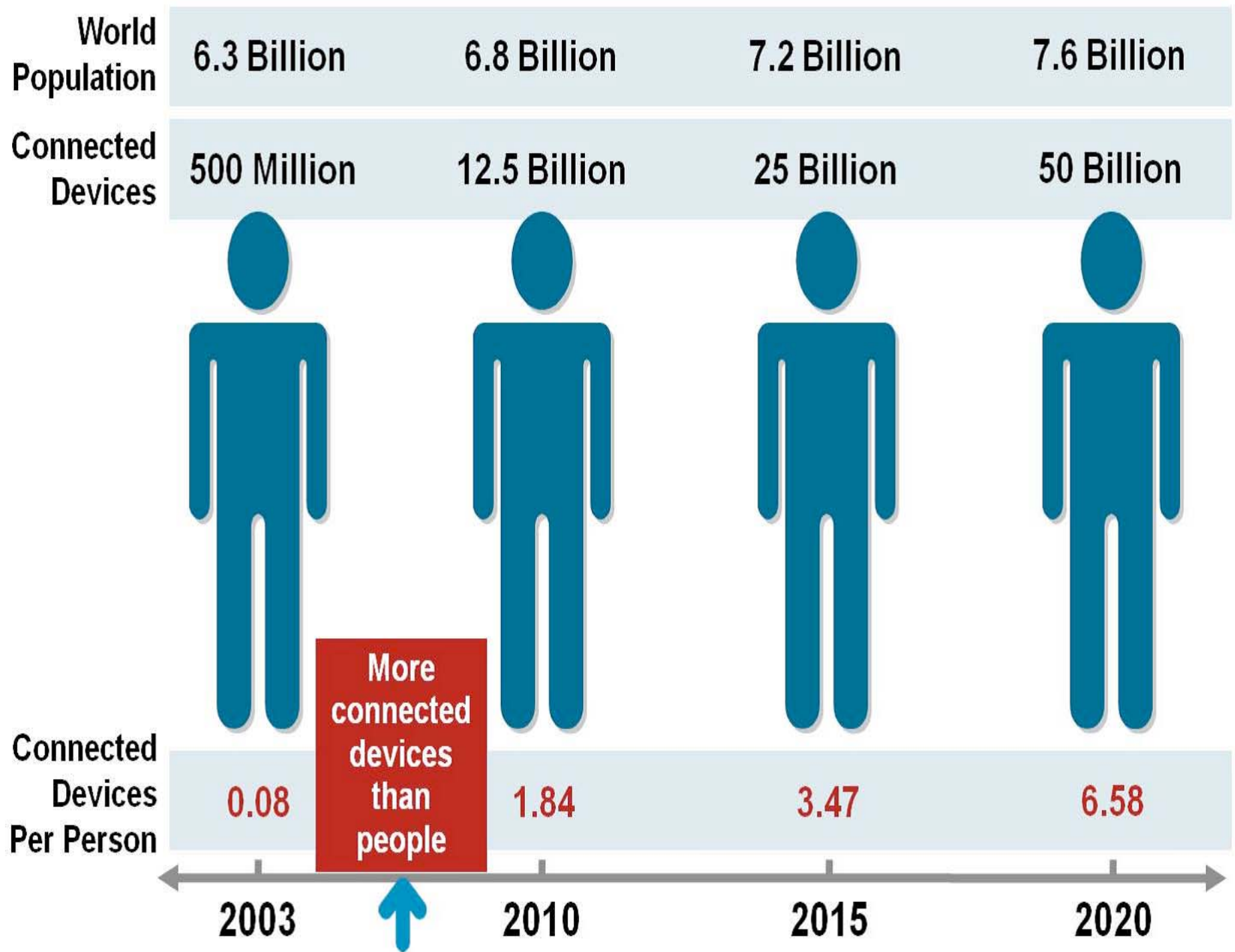
# Ciri Generasi Z (1)

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- Pengguna Instagram (bukan Facebook, Twitter)
- Sangat menggemari olahraga, musik/film, teknologi informasi (khususnya medsos)
- Indonesia: internet user 34% (sekitar 94 juta orang)
- China: internet user 80% (sekitar 800 juta orang)

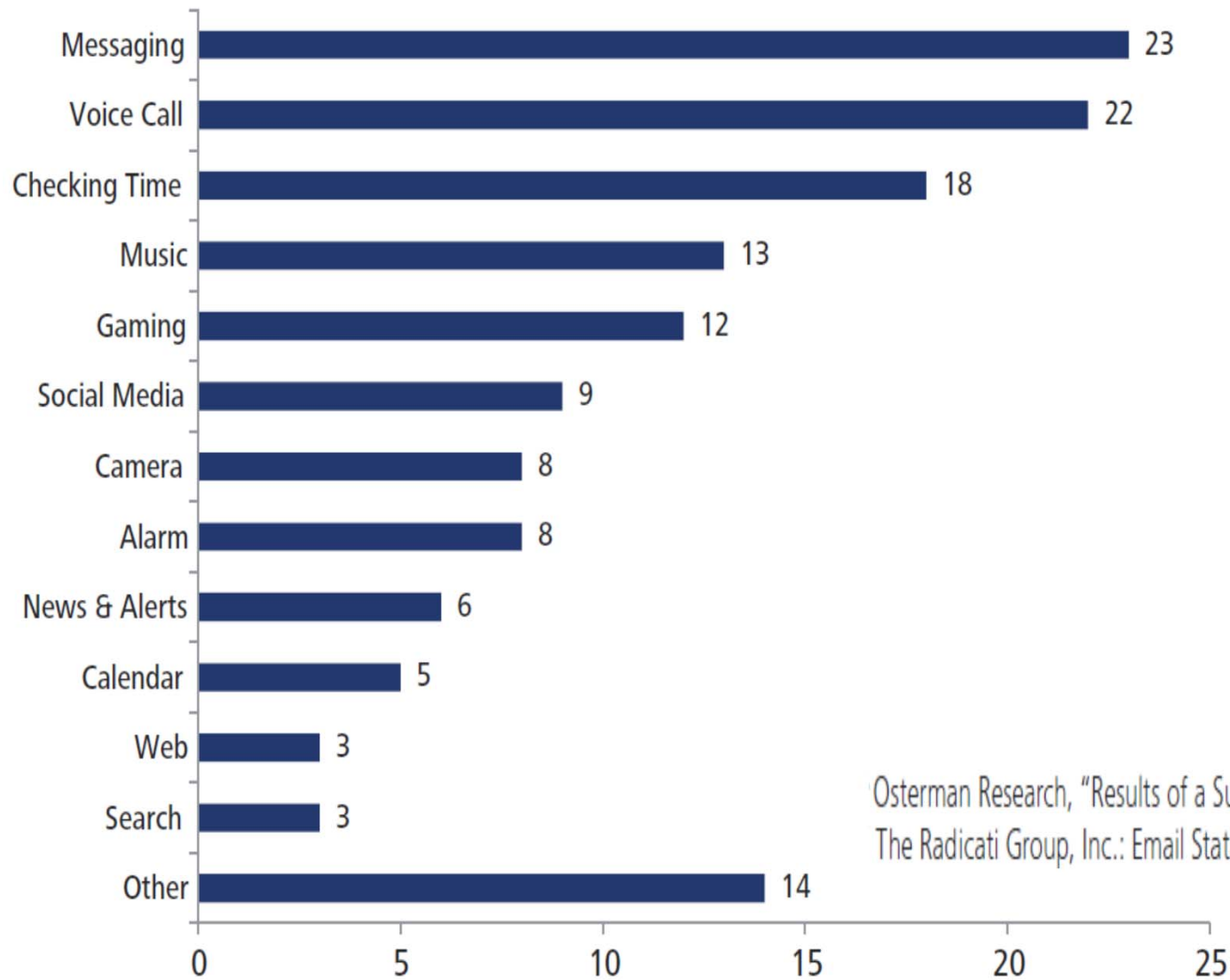
# Ciri Generasi Z (2)

- 78% internet users shop online (e-commerce: backbone of the digital economy)
- 3.5 hrs online use every single day (Indonesia), pembandingan: Jakarta 7 hrs, US: 1.9 hrs
- 3 hrs online on social media (Netizen)
- Forecast (McKenzie): internet users in Indonesia reach 145 millions people by 2020 (Menkominfo: 160 millions)




# Smartphone Users Reach to Phone ~ 150x a Day could be Hands-Free with wearables

# of Times Typical User Checks Phone per Day



Osterman Research, "Results of a Survey with Email Users", April 2013  
The Radicati Group, Inc.: Email Statistics Report, 2013-2017



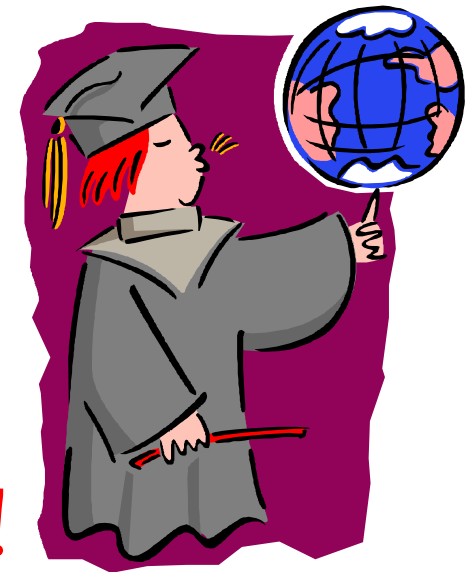


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# PERAN PERPUSTAKAAN SEBAGAI SUMBER INFORMASI DAN SUMBER BELAJAR

# Mengapa Perpustakaan Harus ber-Kualitas ?

- Globalisasi
- Perubahan Teknologi
- Tuntutan Pengguna Jasa Semakin Meningkat
- Tingkat Persaingan Semakin Tinggi
- Efektifitas dan Efisiensi Organisasi



World Class



**SURVIVE !!!**

**Hanya Organisasi yang Memperhatikan Kualitas yang Dapat Bertahan Hidup dan Memenangkan Persaingan**

# Pengertian tentang Mutu dan Penjaminan Mutu

## APA ITU : MUTU ?

Sesuai dengan harapan

**PELANGGAN**

Sesuai dengan harapan

**PEMANGKU KEPENTINGAN**

Seluruh ciri khas dari hasil dan pelayanan memenuhi

**TUNTUTAN KEBUTUHAN dan HARAPAN**

Sesuai dengan

**STANDAR** yang disepakati

Memegang

**JANJI**

DIKENAL

DIPILIH

SUSTAIN

KUALITAS MUTU  
PERPUSTAKAAN  
KUALITY

---

Dunia kita terus berubah

Pendidikan harus  
menjadikan kita manusia  
adaptif dan belajar

# Literasi Baru

- Literasi Data: kemampuan untuk membaca, analisis, dan menggunakan informasi (*big data*) di dunia digital
- Literasi Teknologi: memahami cara kerja mesin, aplikasi teknologi (*Coding, Artificial Intelligence, Engineering Principles*)
- Literasi Manusia: *humanities*, komunikasi dan desain
- Pembeding: literasi lama (*calistung*)

# Fostering Innovation

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- Skills needed are changing: critical thinking, innovation, self driving
- Education systems: enable lecturers to become facilitator of learning (than transmitter of content)
- The application of technology to learning offers huge opportunities
- Partnerships: regulators, business, civil society

MUTU =  
RAISE  
LEAP +

# SISTEM PENDIDIKAN TINGGI

Efficiency & Productivity

Relevance

Accessibility

Academic  
Atmosphere

Learning  
Students

Teaching-Learning Proses

Graduates

Equity

Sustainability  
Market

Leadership

Internal  
Management

Quality  
Assurance

Community  
Acknowledgement

Academic  
Community

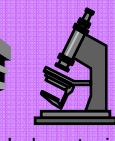
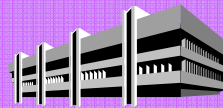
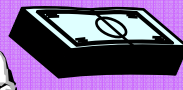
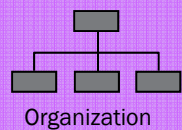
Leadership

Management

Partnership

Demand HE

+ Innovation



Resources



Perencanaan

Pelaksanaan

Pengembangan

Do



PROSES & HASIL PEMBELAJARAN

Act

Dokumen Kurikulum

Plan

Rencana Pembelajaran

Dosen

Sumber belajar

Mahasiswa

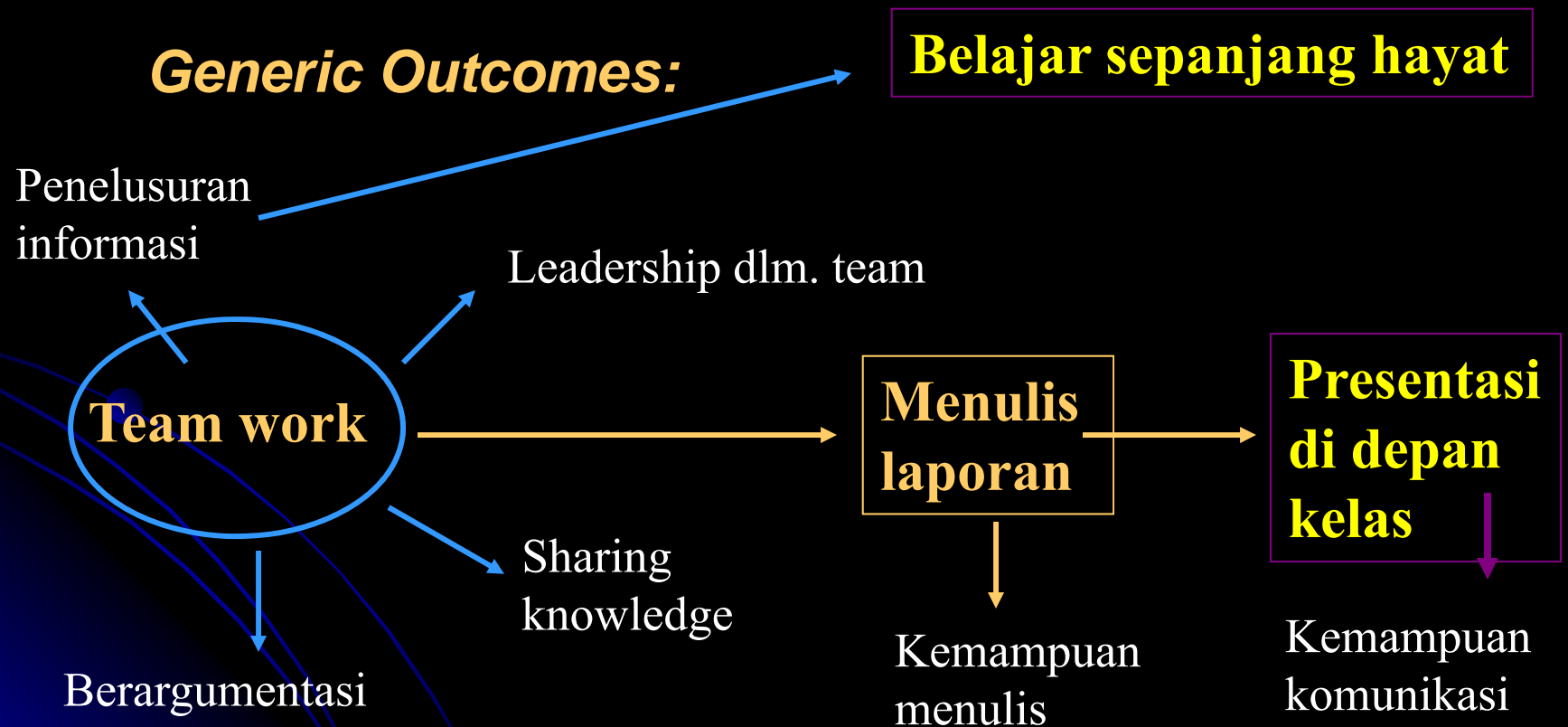
Pengembangan Pembelajaran

Check

EVALUASI PROGRAM PEMBELAJARAN

SISTEM PEMBELAJARAN

# Contoh Proses Pembelajaran



# Peran kepemimpinan dalam pengelolaan perpustakaan yang profesional

# Mengelola Suatu Perubahan Berorientasi Hasil



# LIFE GOALS

- ▶ To share with others, to play a major and significant role in improving the quality of life of others, to be responsible and accountable on whatever we do, to bring a positive impact on the surrounding community and environment



# Why is Leadership Important?

Evidence shows that leadership has increasingly been associated with:

- ▶ high-performing organizations, and

- ▶ that effective leadership in an organization

leads to both higher-quality product and service

as well as greater profit



# LEADERSHIP

# IS

## INFLUENCE

## II

# EXCELLENT (PERFORMANCE)

- Kepemimpinan operasional
- Kepemimpinan organisasional
- Kepemimpinan publik



# LEADERSHIP IS

**Influencing people and  
lifting a person's vision to  
high sights  
and raising performance  
to a higher standard**





# Change Management

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- Think inside the box
- Iteration: doing the same things better (think outside the box)
- Innovation: doing the new things (think without the box)
- Disruption: doing the new things that make the old ones obsolete

“Instead of risking anything new, let’s play it safe by continuing our slow decline into obsolescence”

# A True Culture of Quality

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- Pola Perilaku
- Pola Pikir (IQ)
- Pola Sikap (EQ)

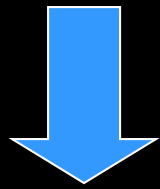
Love Quotient (LQ)?

(kecerdasan kasih, kelembutan hati)

**STEMPATHY**

(Modern Science & Technology and Empathy)

~~\$\$\$ UCC E \$\$\$~~



WITHOUT **YOU**, YOUR ORGANIZATION IS NOTHING

BUT WITH **YOU**, YOUR ORGANIZATION IS SOMETHING, MEANINGFUL  
AND SIGNIFICANT FOR OTHERS



Current State

Organizational Change Process  
"Projects"

Effective Change Management

Individual Change Process  
"People"

Successful Change

# Pre-condition and Resources Required

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- Innovation !!!
- Synergy / networking
- Availability of finance and staff (**this is an investment, not a cost-center**)
- People development

**Leader is fully responsible and ready to embrace and support all !!!**

# Peran Pimpinan (1)

- Pengelolaan perpustakaan secara profesional:
  - Input
  - Process
  - Output
  - Outcome
- Penetapan Rencana Induk Pengembangan, Rencana Strategis, Rencana Operasional
- Pemanfaatan Teknologi Informasi dan pengetahuan untuk mendukung proses layanan di perpustakaan

## Peran Pimpinan (2)

- Merencanakan
- Mengelola dan melaksanakan
- Mengevaluasi
- Mengendalikan
- Mengembangkan

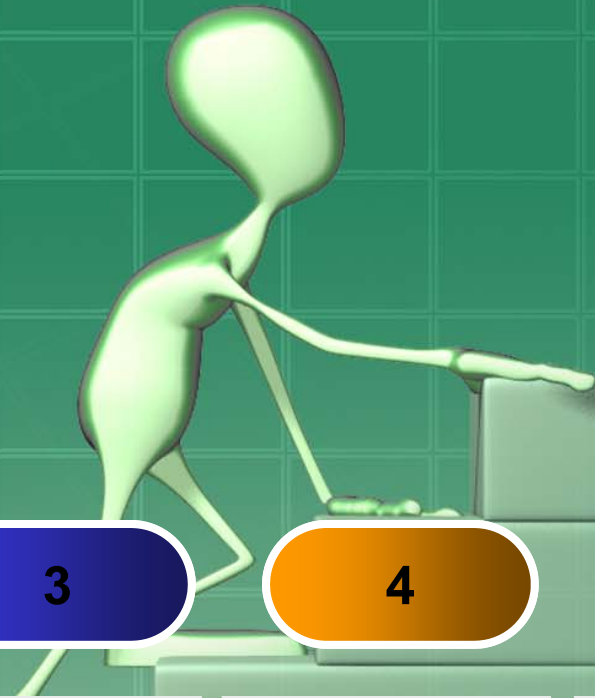
**PENINGKATAN KUALITAS BERKELANJUTAN**

# Building Commitment

- Not 'business as usual'
- Openness
- Innovation: creative global human talent
- Special distinctive excellence
- Ethical integrity
- Library is the place to educate future generation



# 5 TAHAP PEMBUDAYAAN



1

2

3

4

5

**DIPAKSA**

**TERPAKSA**


**BISA**

**BIASA**

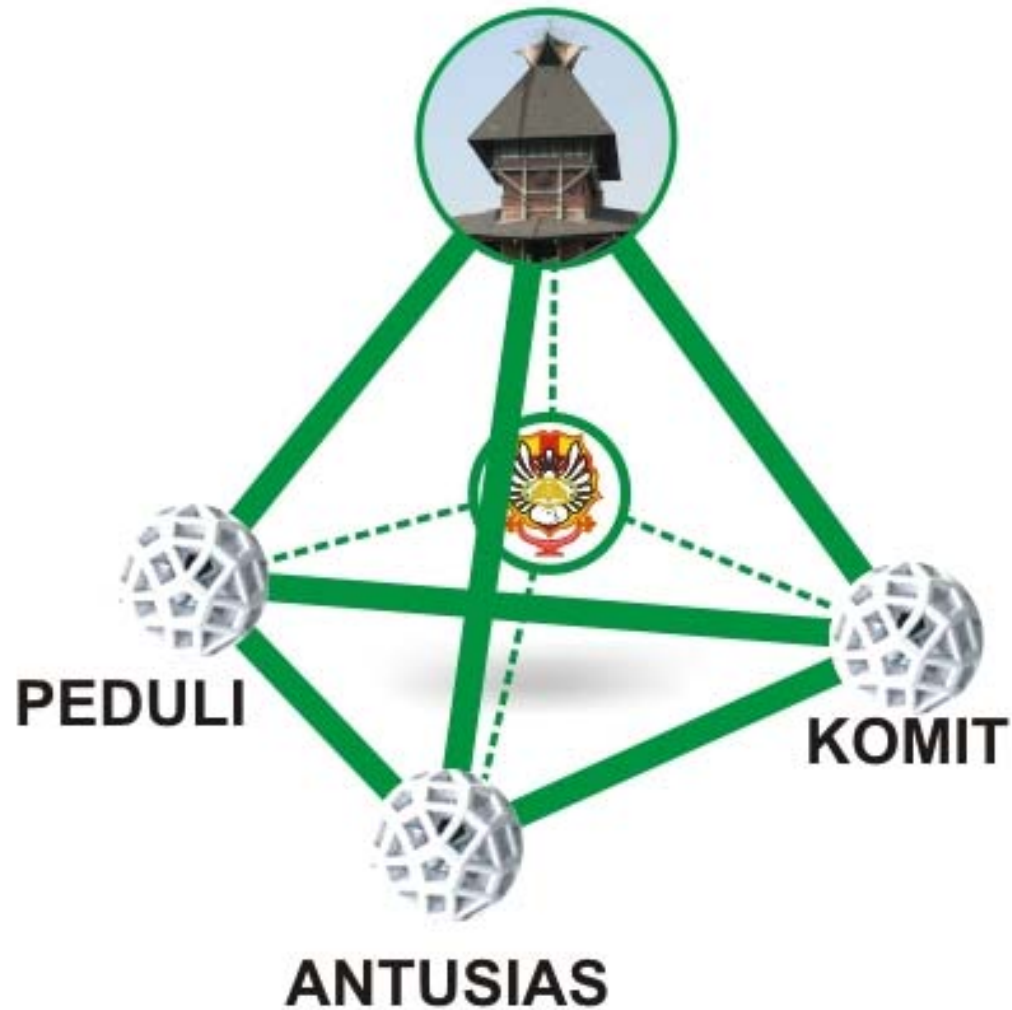
**BUDAYA**

# Proposed Strategy

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- Learning from more mature player
  - Two problems fixed using technology:
    - Producing digital talent at scale
    - Solving last-mile logistical issues
- 

# Model Visualisasi PeKA



# Reflection (1)

- Solution of the problem lies in the heart of mankind
- If you want to go far, go alone
- If you want to go fast, go together
- If you lose hope and character, you will lose everything!

# Reflection (2)

- God know that it is difficult
- God know that you may get tired
- But you also have to know that God would not place you in a situation that you could not handle it



***Terima Kasih***

