



Higher Education 4.0: Knowledge, Industry, Humanity

MANDATE

MINISTER OF HIGHER EDUCATION

2018





CLOSING



WELCOME



INTERNATIONALISATION



THEME



TVET 4.0



RECAP & SUCCESS STORIES 2017



HIGHER EDUCATION 4.0



PROGRESS: REDESIGNING
HIGHER EDUCATION



MANDATE
MINISTER OF HIGHER EDUCATION
2018

WELCOME

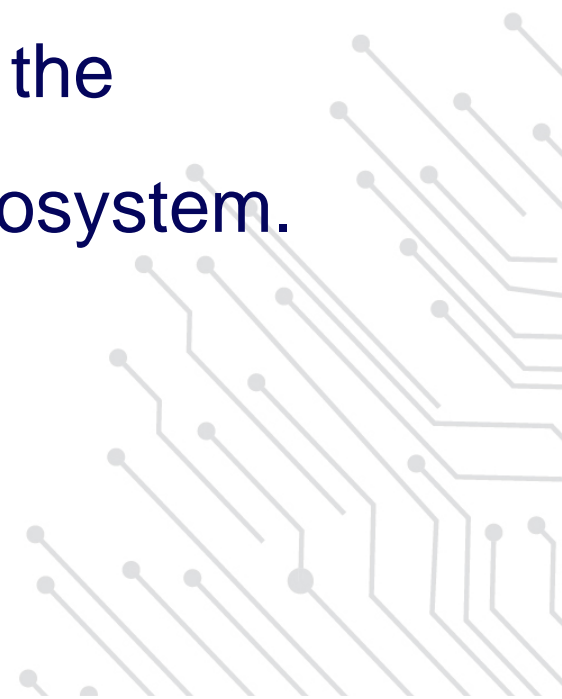
Assalamualaikum WBT
Salam Hormat
Salam *Soaring Upwards*

WELCOME

*Harumanis dari Perlis,
Musang King baunya wangi,
Berkumpul kita menjayakan majlis,
Amanat Menteri Pendidikan Tinggi.*



WELCOME



2018 will be another **GREAT** year for the
Ministry of Higher Education & the
Malaysian higher education ecosystem.



WELCOME



Allow me to introduce my
WINNING TEAM

WELCOME

MY WINNING TEAM



**DATIN PADUKA IR. DR.
SITI HAMISAH TAPSIR**

**DIRECTOR GENERAL of
HIGHER EDUCATION**



**DATUK DR. MARY
YAP KAIN CHING**

DEPUTY MINISTER



**TAN SRI DR. NOORUL
AINUR MOHD NUR**

**SECRETARY
GENERAL**



**PROF. DATO' DR. MOHD
ISMAIL ABD AZIZ**

**DIRECTOR GENERAL of
POLYTECHNICS and
COMMUNITY COLLEGES**



WELCOME

The **Most Innovative Ministry** in Malaysia.

Delivering the **Best Higher Education** system in the world.





WE ARE A COMMUNITY, WE ARE A FAMILY





SOARING UPWARDS

MALAYSIAN HIGHER EDUCATION



THANK YOU



THANK YOU



AKEPT HIGHER
EDUCATION
LEADERSHIP
ACADEMY
AKADEMI KEPIMPINAN PENDIDIKAN TINGGI

THANK YOU



THANK YOU



Waqf @ IPT

THANK YOU



THANK YOU



**SUKARELAWAN
SISWA**
Student volunteers



CLOSING



WELCOME



INTERNATIONALISATION



THEME



TVET 4.0



RECAP & SUCCESS STORIES 2017



HIGHER EDUCATION 4.0



**PROGRESS: REDESIGNING
HIGHER EDUCATION**



MANDATE
MINISTER OF HIGHER EDUCATION
2018

**MANDATE 2018
THEME**

2016

“Flexible Education”

2017

“Redesigning Higher Education”





2018

Higher Education 4.0: Knowledge, Industry, Humanity



**MANDATE 2018
THEME**

2018




**Malaysia
Education
Blueprint
2015-2025**
(Higher Education)


MINISTRY OF
EDUCATION
MALAYSIA



MINISTER OF HIGHER EDUCATION MANDATE 2018

HIGHER EDUCATION 4.0

KNOWLEDGE

INDUSTRY

HUMANITY



CLOSING



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RECAP & SUCCESS STORIES 2017



HIGHER EDUCATION 4.0



**PROGRESS: REDESIGNING
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MANDATE
MINISTER OF HIGHER EDUCATION
2018



RECAP

2017



**SOARING UPWARDS
BUDGET**



**INTERNATIONAL
RECOGNITION**



**ACHIEVEMENTS
& SUCCESS STORIES**

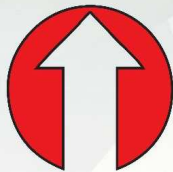




SOARING UPWARDS BUDGET

2018: RM13.89 BILION

2017: RM12.28 BILION



13.15%

#bajetsoaringupwards





INTERNATIONAL RECOGNITION



Francisco Marmolejo
@fmarmole

Follow

Great to hear @MoheOfficial Minister in #Malaysia, @idrisjusoh, about the need to humanize technological advances in the 4th Ind.Revolution

"Malaysia doing innovative work to redesign its higher education system. A global innovative case to follow"



"carrying out many innovative efforts to address 4IR at all levels of its training systems and throughout the entire lifecycle of its citizens".



University of Oxford



Huawei, Samsung, Tencent, Ericsson, & Alibaba



SAUDI



TURKEY



Malaysia will be the first host in Southeast Asia
Global Going Conference 2018

***We have been brave to embrace change.
We are 'Standing in the Eyes of the World'.***





INTERNATIONAL RECOGNITION



Francisco Marmolejo

@fmarmole



#Malaysia doing innovative work to redesign its #highered system. @MoheOfficial. A global innovative case to follow.

@idrisjusoh @NoorulAinur

5:20 PM - Aug 24, 2017





INTERNATIONAL RECOGNITION



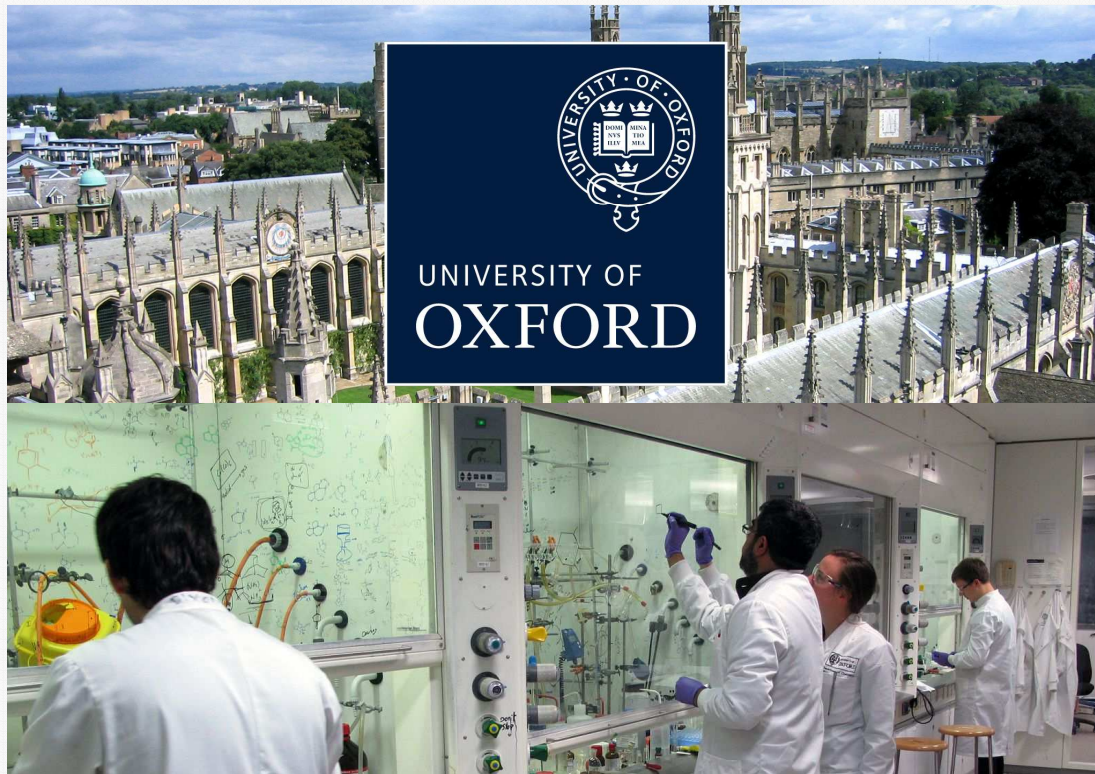
“(Malaysia is among the nations) carrying out many *innovative efforts* to address 4IR at all levels of its training systems and throughout the entire *lifecycle of its citizens*”

‘Powered by Education, East Asia is getting ready for the Fourth Industrial Revolution,’ Raja Bentaouet Kattan, Lead Specialist, Education Global Practice, The World Bank, December 2017





INTERNATIONAL RECOGNITION





INTERNATIONAL RECOGNITION



*MoU signing ceremony between
Alibaba and Malaysia's Universiti
Utara Malaysia (UUM) at the
Malaysia Higher Education Forum,
24 November 2017*





INTERNATIONAL RECOGNITION





INTERNATIONAL RECOGNITION



BRITISH
COUNCIL

The conference for leaders
of international education
Kuala Lumpur Convention Centre,
Malaysia
2-4 May 2018

Global connections, local impact



Going Global
2018

#GoingGlobal2018
@HEGoingGlobal
www.britishcouncil.org/going-global



***Malaysia will be the first country in
Southeast Asia to host
Global Going 2018***



ACHIEVEMENTS SUCCESS



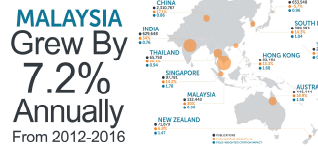
U.M.A.R



QS Subject rankings 2018



US News Best Global University Rankings



Elsevier



Clarivate Analytics



Polytechnic



Community College



MyQUEST



ACHIEVEMENTS & SUCCESS STORIES



U21 RANKING

OF
NATIONAL HIGHER EDUCATION SYSTEMS

36(2012) → 25 (2017)

CONTINUOUS IMPROVEMENT

11 PLACES

WITHIN 6 YEARS

25
2017

27
2016

28
2015

28
2014

27
2013

36
2012





UNIVERSITY OF MALAYA

BREAKING INTO THE TOP 100

within 2 years



QS WORLD UNIVERSITY RANKINGS

2017/2018



University of Malaya global ranking....

M.

BEST UNIVERSITIES IN ASEAN

5 out of 8

Malaysia Research Universities

(3,4,5,7 & 8)

- 1  NANYANG TECHNOLOGICAL UNIVERSITY
- 2  NATIONAL UNIVERSITY OF SINGAPORE (NUS)
- 3  UNIVERSITI MALAYA 
- 4  UNIVERSITI PUTRA MALAYSIA 
- 5  UNIVERSITI KEBANGSAAN MALAYSIA 
- 6  CHULALONGKORN UNIVERSITY
- 7  UNIVERSITI TEKNOLOGI MALAYSIA 
- 8  UNIVERSITI SAINS MALAYSIA 



A.

**TOP
1%
IN
THE
WORLD**

MALAYSIAN UNIVERSITIES

Our Research Universities Are

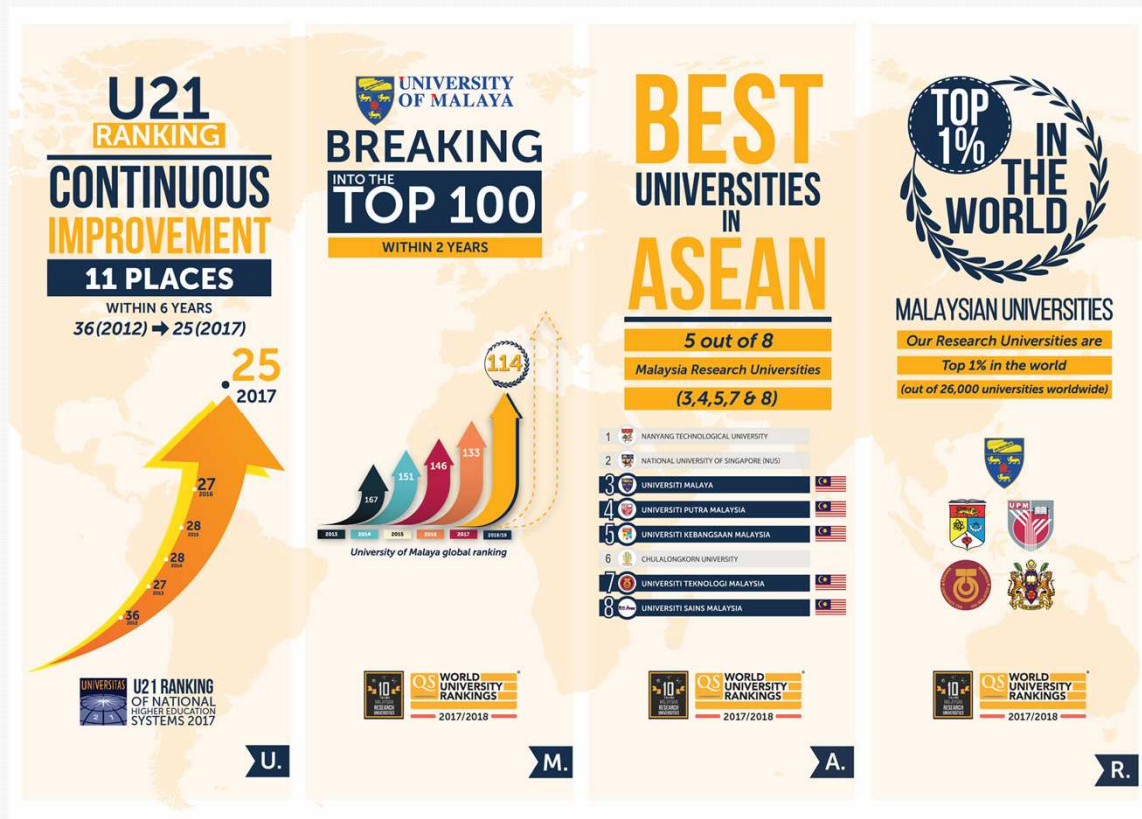
Top 1% in the world

(out of 26,000 universities worldwide)



R.

ACHIEVEMENTS & SUCCESS STORIES



ACHIEVEMENTS & SUCCESS STORIES



QS WORLD UNIVERSITY RANKINGS **2017**
by subject



Eleven subjects. Top 50 in the world.



2017	SUBJECT
23 rd	ELECTRONIC & ELECTRICAL ENGINEERING
26 th	DEVELOPMENT STUDIES
33 rd	MECHANICAL ENGINEERING
38 th	CHEMICAL ENGINEERING
41 st	EDUCATION



2017	SUBJECT
32 nd	HOSPITALITY & LEISURE MANAGEMENT
35 th	MINERAL & MINING
38 th	CHEMICAL ENGINEERING
49 th	ENVIRONMENTAL SCIENCES



2017	SUBJECT
29 th	HOSPITALITY & LEISURE MANAGEMENT



2017	SUBJECT
46 th	THEOLOGY, DIVINITY & RELIGIOUS STUDIES



ACHIEVEMENTS & SUCCESS STORIES



Congratulations!

 **UNIVERSITY OF MALAYA**

BEST GLOBAL UNIVERSITIES
USNews
A WORLD REPORT
2018

RANKED TOP 10
★★★★★

BEST GLOBAL UNIVERSITIES FOR ENGINEERING

"University of Malaya (UM) has been placed at the impressive 10th position among global universities in Engineering."
#SoaringUpwards

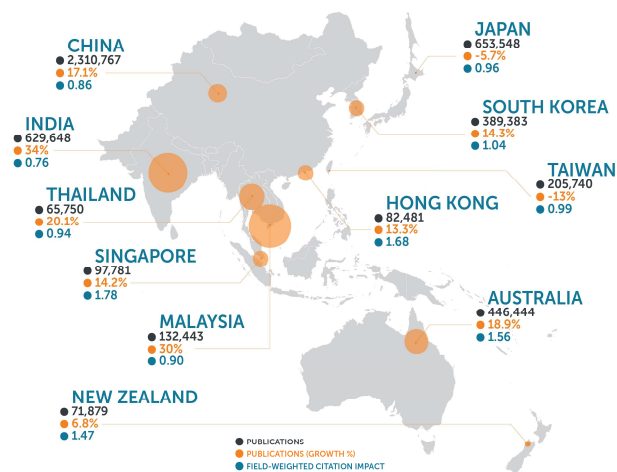
 **SOARING UPWARDS**
MINISTRY OF HIGHER EDUCATION



ACHIEVEMENTS & SUCCESS STORIES

MALAYSIA
Grew By
7.2%
Annually
From 2012-2016

World Average
1.1%





ACHIEVEMENTS & SUCCESS STORIES



THE WORLD'S MOST INFLUENTIAL SCIENTIFIC MINDS 2017

Ranking in the top 1% by citations for field and publication year in Web of Science, Highly Cited Researchers are leading the way in solving the world's biggest challenges



Prof. Dr. Abdul Latif Ahmad
Chemical Engineering



Prof. Dato' Ir. Dr. Wan Ramli
Engineering



Prof. Dr. Bassim H. Hameed
Chemical Engineering



Prof. Dr. Siti Kartom Kamarudin
Engineering



Prof. Ir. Dr. Masjuki Haji Hassan
Engineering



Prof. Dr. Alias Abdul Karim
Agricultural Sciences



Prof. Dr. Teuku M I Mahlia
Engineering



Associate Prof. Dr. Md. Abul Kalam
Engineering



Prof. Dr. Bawagoot
Computer Science



Prof. Dr. Saidur Rahman
Engineering



 **ACHIEVEMENTS & SUCCESS STORIES**





ACHIEVEMENTS & SUCCESS STORIES



ACHIEVEMENTS & SUCCESS STORIES



Ranaco Education and Training Institute



Penang International Dental College



UNITI College



German Malaysian Institute



SEGi College Penang



IBS College



Kolej Poly-Tech Mara Bangi



Netherlands Maritime Institute of Technology



Sunway College Johor Bahru



SEGi College Sarawak



SEGi College Subang Jaya



Ramsay Sime Darby Healthcare College



Sunway College Kuala Lumpur



MSU College Shah Alam



Kolej Teknologi Timur

ACHIEVEMENTS & SUCCESS STORIES





CLOSING



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RECAP & SUCCESS STORIES 2017



HIGHER EDUCATION 4.0



**PROGRESS: REDESIGNING
HIGHER EDUCATION**



MANDATE
MINISTER OF HIGHER EDUCATION
2018

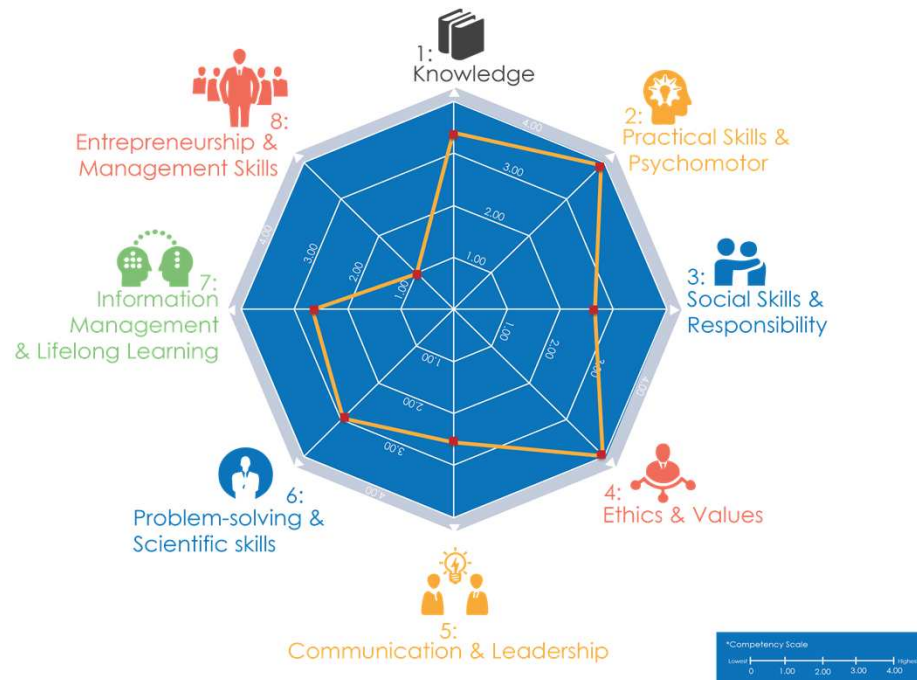
**PROGRESS:
REDESIGNING
HIGHER EDUCATION**





iCGPA

Integrated Cumulative Grade Point Average or iCGPA.



20
UNIVERSITIES

18
POLYTECHNICS

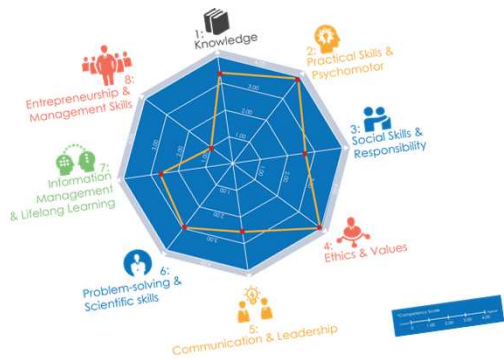
15
COMMUNITY COLLEGES

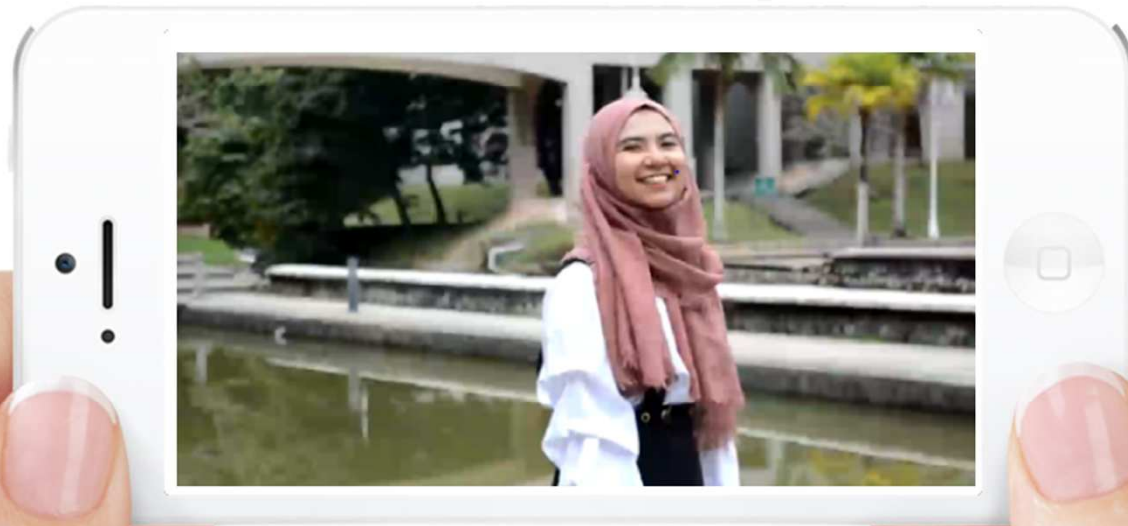




iCGPA

Untuk tahun 2018, saya telah mensasarkan supaya sekurang-kurangnya 40% program di setiap fakulti dan jabatan di Institusi Pendidikan Tinggi Awam melaksanakan iCGPA.







Pada tahun 2018, saya mengarahkan supaya setiap Institusi Pendidikan Tinggi Awam mewujudkan sistem e-Portfolio dan mengintegrasikan e-Portfolio masing-masing dengan sistem iCGPA.





Malaysia English Assessment or MEA





Pada tahun 2018, saya mencadangkan supaya MEA diintegrasikan dengan komponen komunikasi dalam iCGPA.





Pada tahun 2018, saya telah mensasarkan supaya sekurang-kurangnya 40% program di setiap fakulti dan jabatan di Institutsi Pendidikan Tinggi Awam melaksanakan iCGPA.

Saya juga mengarahkan supaya setiap IPTA mewujudkan sistem e-Portfolio dan mengintegrasikan e-Portfolio masing-masing dengan sistem iCGPA.

Saya juga menyeru supaya MEA diintegrasikan dengan komponen komunikasi dalam iCGPA.



Universities:



Industry Partners:



- ✓ 2 Years in University, 2 Years in industry
 - ✓ Intensify industry exposure to create workforce ready graduates.
- 2017/18 ACADEMIC SESSION: 7 UNIVERSITIES 27 PROGRAMMES







اَوْنِبُوْرَسِيْتِي تِيْنِكُوْلُوْ كِيْن مَارَا
UNIVERSITI
TEKNOLOGI
MARA

Tahniah diucapkan kepada UiTM kerana telah mula menawarkan 12 program 2u2i.

Saya berharap IPTA lain turut meningkatkan penawaran 2u2i mereka pada tahun ini dan menjemput IPTS untuk turut bersama melaksanakannya.





  @hamidah.naziadin



Hamidah Naziadin (@hamidah.naziadin)

7:11 AM Dec 3, 2017

These two teachers Dr Emma and Dr Husna are my mentees under the CEO faculty program. And I must say I am most impressed with their commitment and passion. Ever willing to learn and keeping an open mindset all the time. Thank you for a well organized program today. Keep it up ladies.

#mymenteesarebetterthanyours #learningalotfrommymentees #ceofacultyprogramme
#ceofacultyprogramme2

CEO @ Faculty Programme







CEO@Faculty PROGRAMME

'Innovation in Business : Proven's Experience'

by **YBHG. DATO' YUSOF JUSOH**
Executive Chairman, Proven Holding Sdn. Bhd.

02 MAY 2017
10am-12.30pm
Hotel UiTM Shah Alam



CEO @ FACULTY PROGRAMME

SOARING UPWARDS

60
MELONJAK UTM DI PERSADA GLOBAL





Paa tahun 2018, saya menyasarkan penambahan 10 tokoh korporat daripada pelbagai industri untuk terlibat dengan program CEO@Faculty.

Di samping itu, Kementerian akan meneruskan CEO@Faculty 2.0 dan melibatkan 60 pensyarah muda.

Program CEO@Faculty juga akan diperluaskan ke Politeknik dan Kolej Komuniti.





Accreditation of Prior Experiential Learning → **2017: 3904**
(Enculturing Lifelong Learning) 2016: 1893





Massive Open Online Courses

254
MOOCs

427,300
Students in Malaysia

76,000
Enrolments from overseas in
Malaysia MOOC
(UA, IPTS and Polytechnics)
From over 170 Countries



Mohamed Amin Embi

**Rethinking Teaching;
Redesigning Learning**

5711 Students



Mushtak Al-Atabi

**Success - Achieve Success with
Emotional Intelligence**

6528 Students



PutraMOOC

Agriculture and Man

811 Students





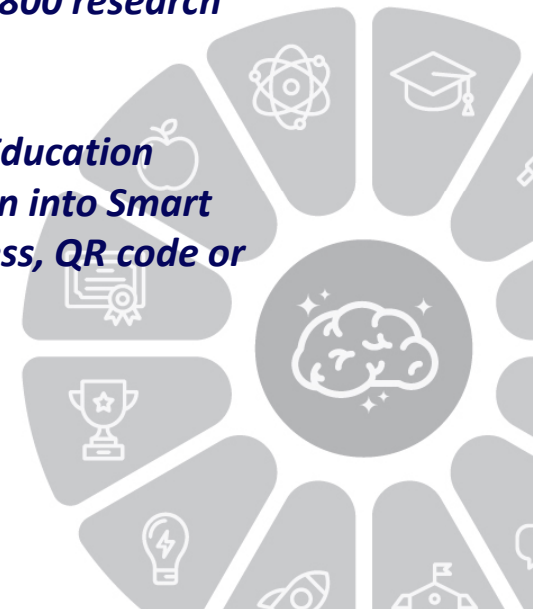
#GigaBitClub



100GBPs Hi-speed internet for higher education institutions.

Empowering global research links. Connected to over 50 million users and 800 research institutions.

Enabling Higher Education Institutions to turn into Smart Campuses (cashless, QR code or mobile services).

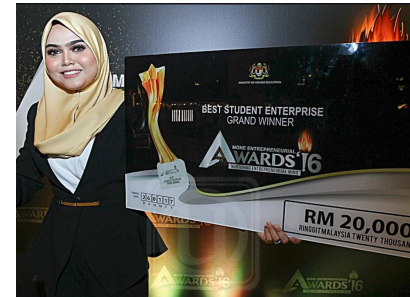




#GigaBitClub

**Bagi mentransformasi IPTA
Malaysia sebagai Kampus
Pintar (*Smart Campus*),
Kementerian menyasarkan
bahawa kesemua IPTA
memulakan proses
pelaksanaan Smart Campus
mulai Jun 2018.**





LEARN UNLEARN RELEARN ENTREPRENEURSHIP & INNOVATION



@MOHE

ENTREPRENURSHIP @ MOHE





Selaras dengan Pelan Tindakan Keusahawanan 2016-2020, untuk tahun 2018, Kementerian menyasarkan:

80% pelajar mendapat pendedahan keusahawanan semasa belajar,

9% pelajar mendaftarkan perniagaan semasa dalam pengajian; dan

3.5% graduan memilih keusahawanan sebagai profesion pilihan.





**RUMAH
KOMUNITI
&
POLYHOME**



**The first home.
2 Feb 2016.**



The 100th. 30 Jan 2017.



The 185th Home. 6 Jan 2017.



**200th
Home.
Coming
soon.**

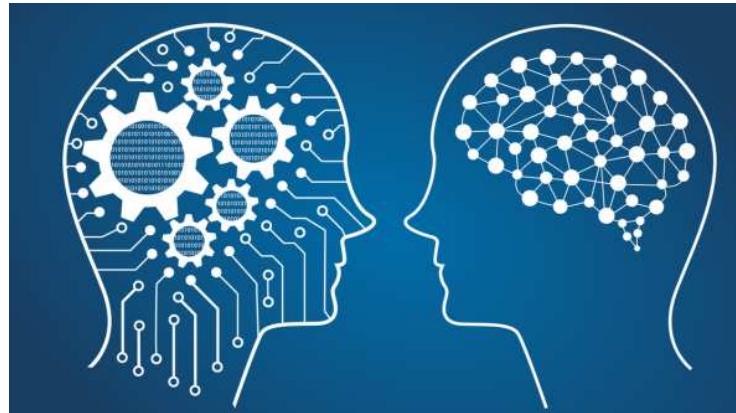




**TRANSLATIONAL
RESEARCH 2.0
(TR@M 2.0)**



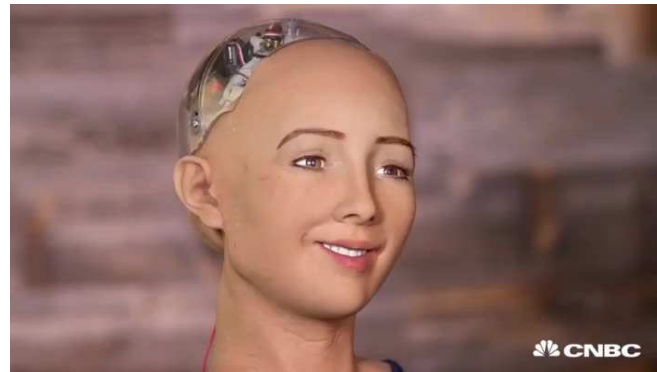
**TRANSLATIONAL
RESEARCH 2.0
(TR@M 2.0)**



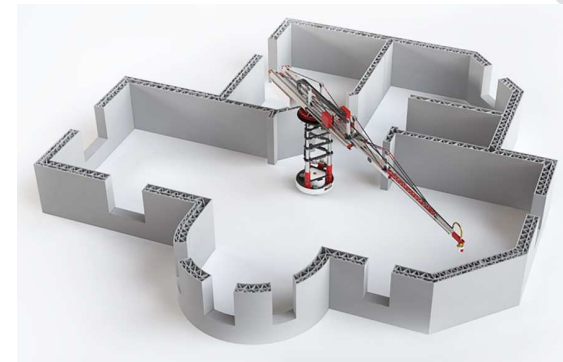
Artificial Intelligence



Precision Farming



Humanoid & Robotics



3D House Printing

**TRANSLATIONAL
RESEARCH 2.0
(TR@M 2.0)**



MOF dan Cyberview Sdn Bhd. bagi merealisasikan Futurise Centre

**TRANSLATIONAL
RESEARCH 2.0
(TR@M 2.0)**



RAPAT (Research Alliance and Partnership)

INTERNATIONALISATION



International Branch Campuses and Collaborations. Towards becoming an international higher education hub



170,000+
**INTERNATIONAL
STUDENTS**
(as at 2017)

150+
NATIONS

**Quality, Cost,
Cultural Comfort,
Language of
Instruction
& Quality of Life**
Top 5 reasons Malaysia is a
preferred higher education
destination (UNESCO)



Thank you for choosing Malaysia

INTERNATIONALISATION

TERIMA KASIH



- ✓ Visa processing
- ✓ Academic & security screening
- ✓ Student support services





Australia &
New Zealand





CLOSING



WELCOME



INTERNATIONALISATION



THEME



TVET 4.0



RECAP & SUCCESS STORIES 2017



HIGHER EDUCATION 4.0

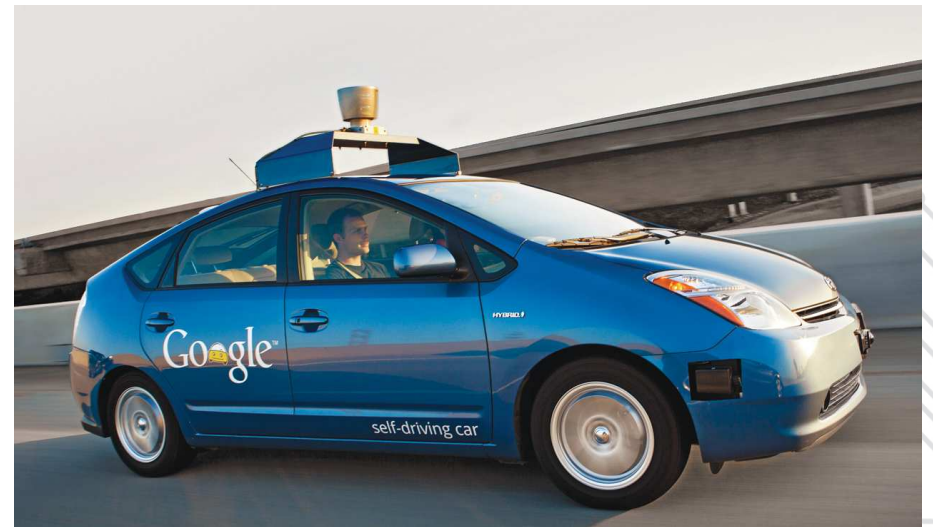
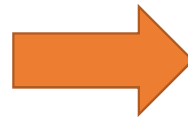


**PROGRESS: REDESIGNING
HIGHER EDUCATION**

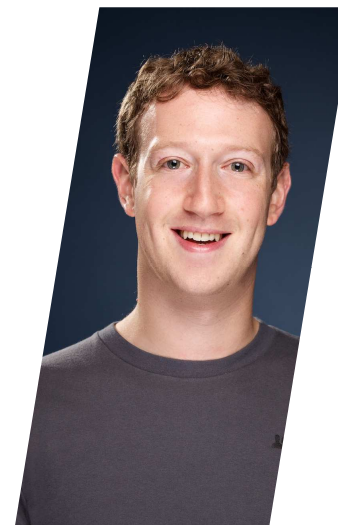
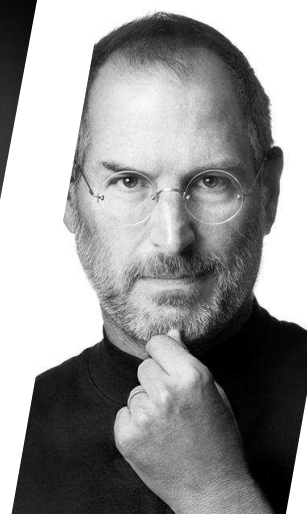


MANDATE
MINISTER OF HIGHER EDUCATION
2018

HIGHER EDUCATION 4.0



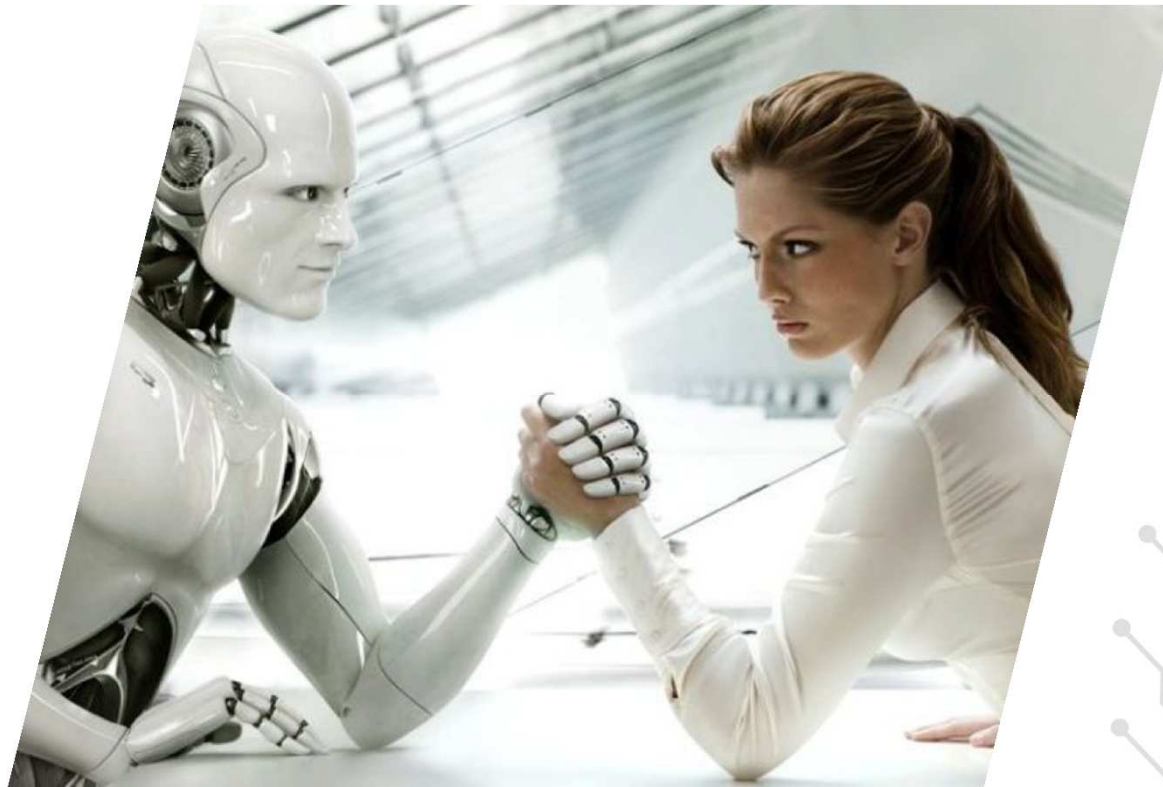
**HIGHER
EDUCATION 4.0**



HIGHER EDUCATION 4.0



**In an era of
Automation, Artificial
Intelligence and
Robots, how do we
ensure that we
remain relevant and
competitive?**



MINISTER OF HIGHER EDUCATION MANDATE 2018

HIGHER EDUCATION 4.0

KNOWLEDGE

INDUSTRY

HUMANITY

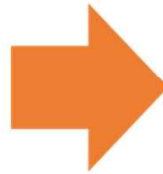
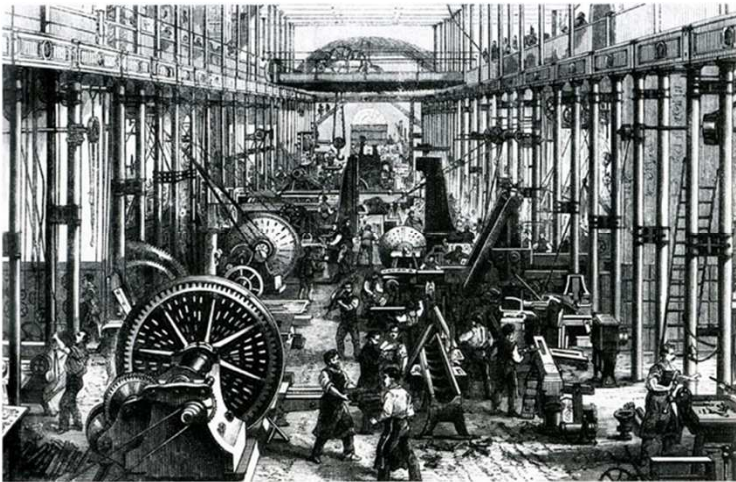
In 2017, the Ministry of Higher Education embarked on a year-long effort to better understand 4IR and its impact on higher education

INTRODUCTION TVET 4.0 FRAMEWORK



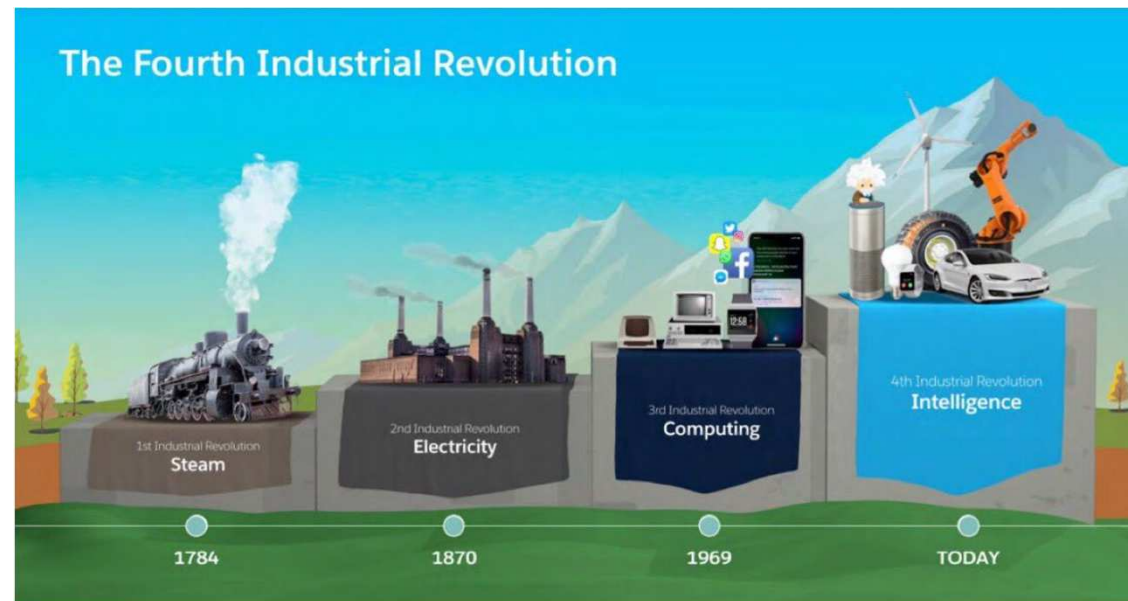
HIGHER EDUCATION 4.0

1. 4IR is the **continuation of a journey** achieved through advances in science and technology



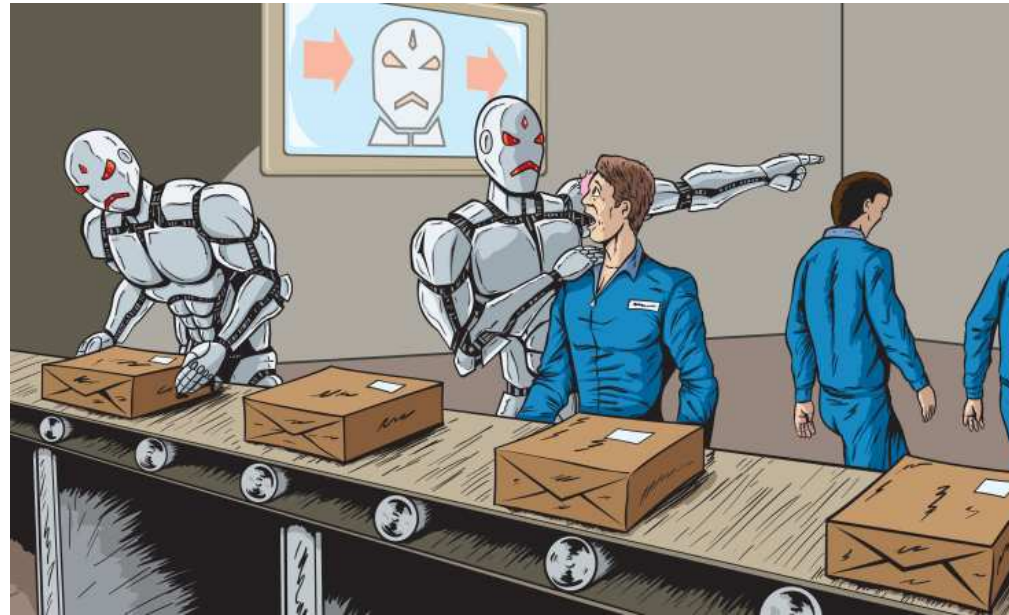
HIGHER EDUCATION 4.0

2. EACH INDUSTRIAL REVOLUTION CHANGES THE WAY WE LIVE, WORK AND INTERACT WITH EACH OTHER



HIGHER EDUCATION 4.0

3. 4IR – RAPID CHANGE, V.U.C.A, EVOLVING JOBS



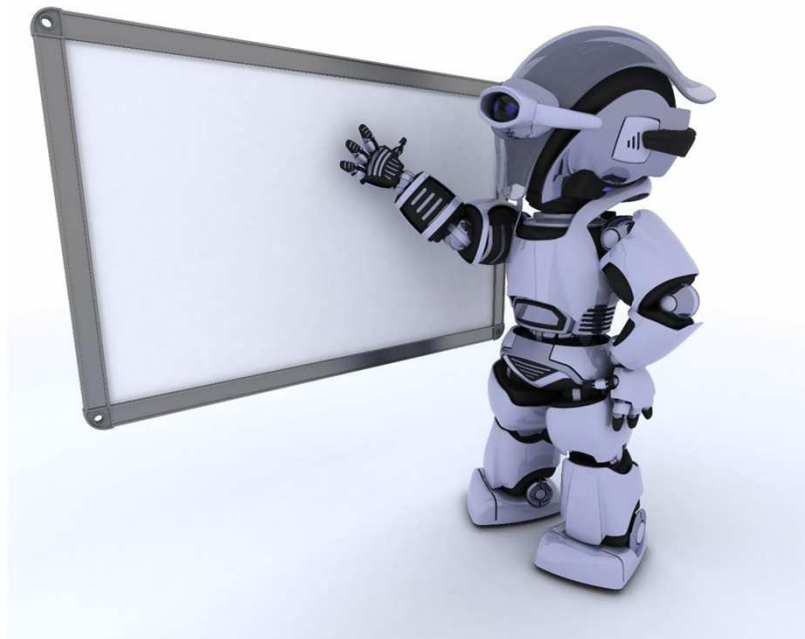
HIGHER EDUCATION 4.0

4. HUMANS EMERGE AS CHAMPIONS



HIGHER EDUCATION 4.0

5. EDUCATION IS KEY TO FACE 4IR CHALLENGES



**Fluid & Organic
Curriculum**

**Latest L&T
Technologies**

**21st Century
Pedagogy**

**LEARNING
& TEACHING
4.0**

**Redesigning
Learning Spaces**

LEARNING & TEACHING 4.0



REDESIGNING LEARNING SPACES



FLUID & ORGANIC CURRICULUM



21ST CENTURY PEDAGOGY



LATEST L&T TECHNOLOGIES

**LEARNING &
TEACHING 4.0**

REDESIGNING LEARNING SPACES



Lecture hall with multi-tiered collaborative tables



Maker Space in Shenzhen, China



KEMENTERIAN PENDIDIKAN TINGGI



UNIVERSITI
PENDIDIKAN
SULTAN IDRIS

اونيورسيتي قنديديقن سلطان ادريس

SULTAN IDRIS EDUCATION UNIVERSITY



Microsoft



Skype for Business



Microsoft Teams

LEARNING & TEACHING 4.0

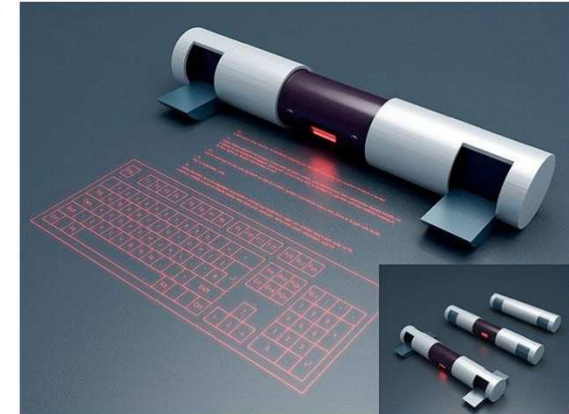
FLUID & ORGANIC CURRICULUM



Cryptocurrencies



Foldable displays



Tactile Projection

FLUID & ORGANIC CURRICULUM

Kementerian akan memperkenalkan dasar di mana semua IPT dibenar menawarkan 30% daripada kurikulum yang bersifat boleh lentur dan organik.

LEARNING & TEACHING 4.0

21st CENTURY PEDAGOGY



HEUTAGOGY
(Self determined learning)



PARAGOGY
(peer-oriented learning)



CYBERGOGY
(virtual based learning)

LEARNING & TEACHING 4.0

21st CENTURY PEDAGOGY

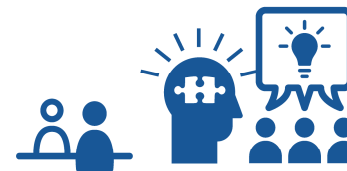
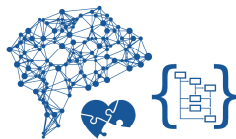
Top 10 skills

in 2020

1. Complex Problem Solving
2. Critical Thinking
3. Creativity
4. People Management
5. Coordinating with Others
6. Emotional Intelligence
7. Judgment and Decision Making
8. Service Orientation
9. Negotiation
10. Cognitive Flexibility

in 2015

1. Complex Problem Solving
2. Coordinating with Others
3. People Management
4. Critical Thinking
5. Negotiation
6. Quality Control
7. Service Orientation
8. Judgment and Decision Making
9. Active Listening
10. Creativity



Source: Future of Jobs Report, World Economic Forum

LEARNING &
TEACHING 4.0

21st CENTURY PEDAGOGY



Alternative Assessment Approaches

**LEARNING &
TEACHING 4.0**

21st CENTURY PEDAGOGY



***Assessment
without
Examinations***



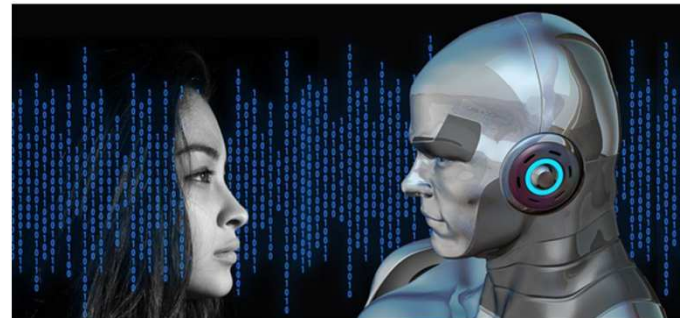
***Lectures without
Classes***

**LEARNING &
TEACHING 4.0**

LATEST L&T TECHNOLOGIES



Learning Analytics



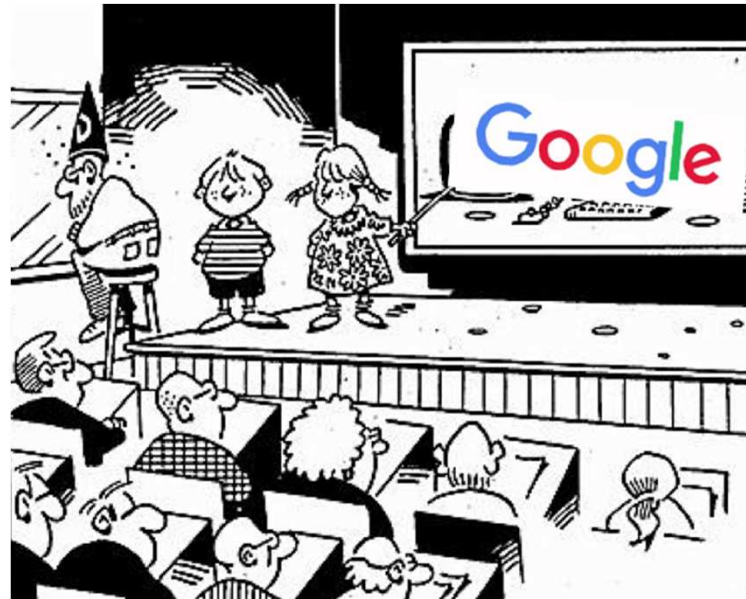
Artificial intelligence



Robotics

**LEARNING &
TEACHING 4.0**

PROFESSIONAL DEVELOPMENT FOR LECTURERS



***“Ok, so this is how our generation
does homework”***

LEARNING & TEACHING 4.0

PROFESSIONAL DEVELOPMENT FOR LECTURERS

Pada tahun 2018, saya dengan sukacitanya mengumumkan pelaksanaan **Program Pemantapan Perkembangan Profesional Pembelajaran dan Pengajaran 4.0** dengan sasaran menjelang **tahun 2020, sekurang-kurangnya 30%** daripada kesemua PdP di IPTA akan sejajar dengan PdP 4.0.

LEARNING & TEACHING 4.0

PROFESSIONAL DEVELOPMENT FOR LECTURERS



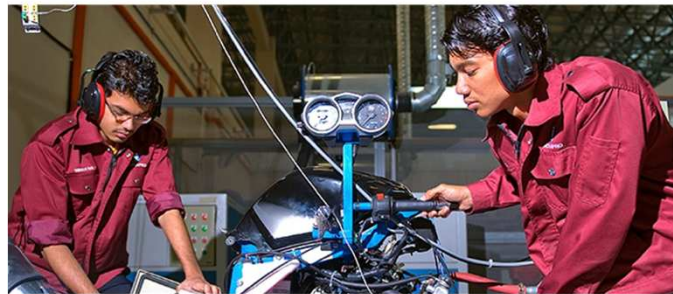
*Rethinking and Redesigning
Higher Education Awards will
be continued in 2018.*



**INDUSTRY &
ACADEMIA ARE
ONE**



**INDUSTRY &
ACADEMIA ARE
ONE**



TalentCorp
ATTRACT • NURTURE • RETAIN

PPRN
PUBLIC-PRIVATE RESEARCH NETWORK



UTM **MDEC**
MINISTERI PENDIDIKAN MALAYSIA
Majlis Transformasi Digital

CEO
@ FACULTY
PROGRAMME

**Towards Empowering Malaysian
Women in Technology**

Dato' Yasmin Mahmood
CEO of MDEC

INDUSTRY &
ACADEMIA ARE
ONE

TVET 4.0 FRAMEWORK





HUMANITY

**Future
Jobs**

**Emotional
Intelligence
& Love Quotient**

HUMANITY

***Emotional Intelligence & Love Quotient:
Equipping our students to face the challenges of 4IR***



Ultimately, **technology is a tool.**

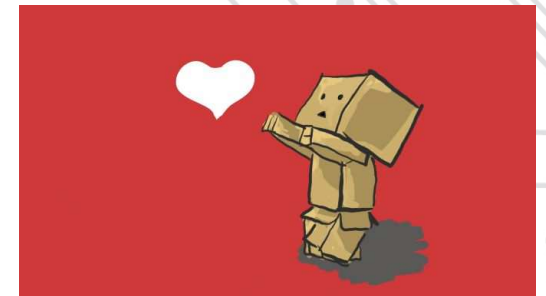
People come first.

Its purpose should be **centered on humanity** and **public interest.**

Where **tolerance, respect, care** and **compassion** come into play.

Eventually it boils down to **culture** and **values.**

With the 4IR ushering a **new cultural renaissance.**
It'll need a **collective wisdom.**



Humanising the 4IR

HUMANITY



*To nurture future leaders with a sense of **love, care and compassion** for others*

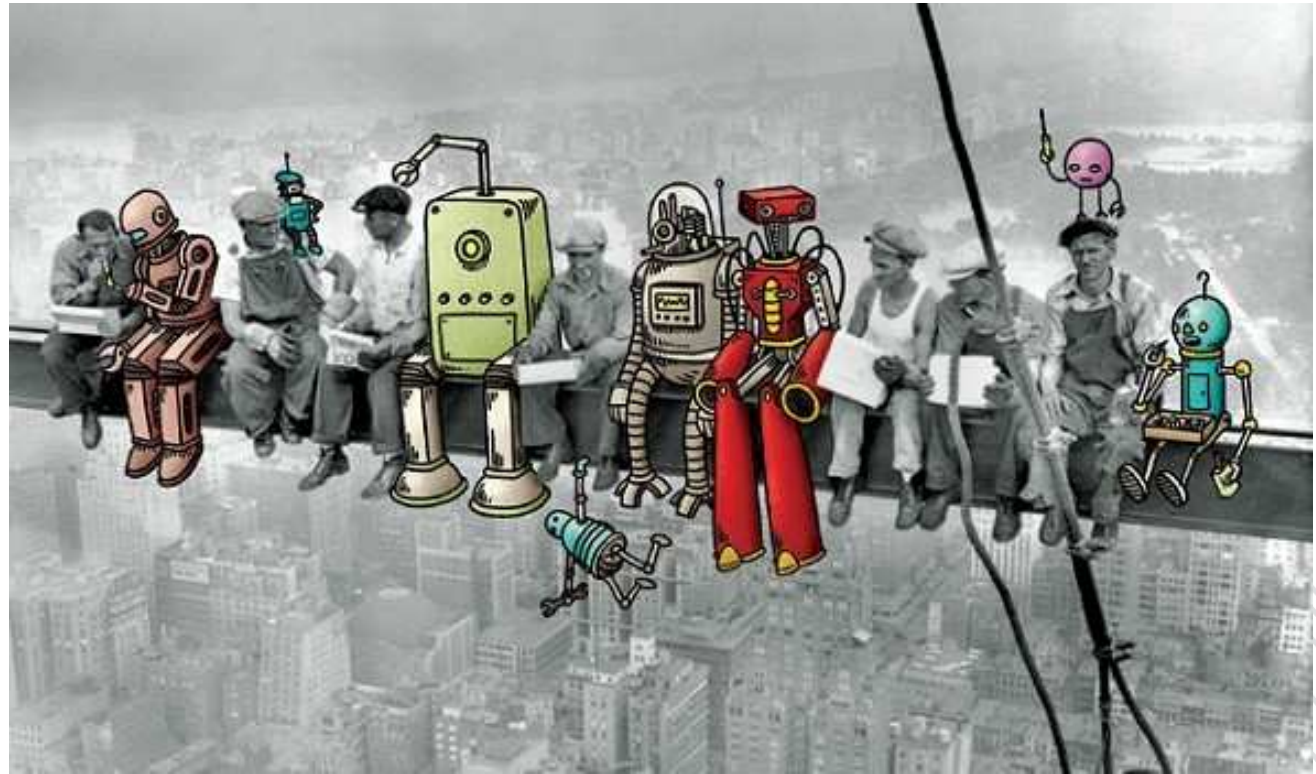
HUMANITY

Jack Ma's LQ – Love Quotient



“If you want to be successful, you should have Emotional Quotient (EQ) and Intelligence Quotient (IQ), **but if you want to be respected, if you want to survive the next 30 years, you should teach our kids the “Q” of love, of care for others. This is love quotient**”.

FUTURE JOBS



10 "COOL" JOBS OF THE FUTURE

THE NEXT DECADE

URBAN FARMER



We're going to run out of farmable land pretty soon. Even if we don't, the cost of transporting food to the cities will become prohibitive. Farming on rooftops and in underground bunkers, using advanced hydroponic technology, will become commonplace.

ALTERNATIVE REALITY ARCHITECT

Widespread use of wearable technology, like Google Glass, is almost upon us. It won't be long before unaugmented reality is boring. We'll need people to research, write and design the virtual augmentations that will soon litter our landscape.



PERSONALITY PROGRAMMER



As artificial intelligence continues to develop, the nondescript computer voice that seems to be the default (think Siri) will get boring. Offering users the chance to download different AI voices and different personalities could prove very popular. We'll need people to program and test those personalities.

ORGAN AGENT

Advancements in surgical science will make organ transplants even more commonplace – but finding donors will remain a bottleneck. One solution? People who specialize in finding healthy and willing donors.



REMOTE DRONE PILOT



Though they're controversial right now, drones have immense potential for the transportation industry. Freight trains, 18-wheelers and even pizza delivery cars could all be piloted from central locations.

2025 AND BEYOND

DRONE DISPATCHER

As drone technology improves, drones will become largely self-piloting and the need for human pilots will diminish. Instead, a new industry could spring up around drone dispatching. Those with the multi-tasking ability to monitor the activities of a pack of drones could be in high demand.



GARBAGE MINER



Earth's resources are finite and we could soon find ourselves having to mine our own landfills for precious metals and other minerals that we simply threw in the trash during times of affluence.

WEATHER COORDINATOR

Meteorology will soon sound like a laughably quaint and ineffectual profession. Soon, we'll develop the ability to influence and, ultimately, control the weather on earth. Rain and snow won't go away forever, but they'll be timed to cause minimal disruption.



ORGAN FARMER



Once we develop the ability to grow human organs from scratch, we'll no longer need donors to perform transplant surgeries. Instead, we'll require skilled workers to monitor the sterile environments in which we cultivate hearts, lungs, eyes and more.

MEMORY MANIPULATOR

Why spend hundreds of dollars on a trip to Disney World when you can pay someone to implant the memories of the trip in your brain? And why stop at things you could do in real life - why not pay for a fond memory of that time you caught the winning touchdown in the Super Bowl?



MANOLITH
www.manolith.com

INSPIRED BY: <http://www.futuristmag.com/2011/11/55-jobs-of-the-future/>

7 Trending Jobs of the Future

1 CYBER SECURITY SPECIALIST

With the rise of the digital economy, cyber security specialist are demand in every sectors.



2 DIGITAL MARKETING EXPERT

In an ecommerce and app era, digital marketers who are proficient in SEM, SEO, PPC and Social media marketing are highly sought after.



3 3D PRINTING SPECIALIST

buzz words:
3d printing technician, 3d printing freelance



4 URBAN FARMERS

buzz words:
farmers market jobs, urban agriculture

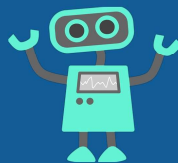
5 DATA SCIENTIST

buzz words:
data visualization, data mining, big data wranglers, unstructured and structured



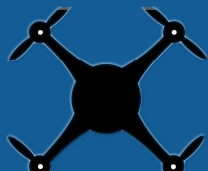
6 ROBOTICS ENGINEERS

buzz words:
robotic applications, intelligent robotics engineering, Artificial Intelligence Robotics



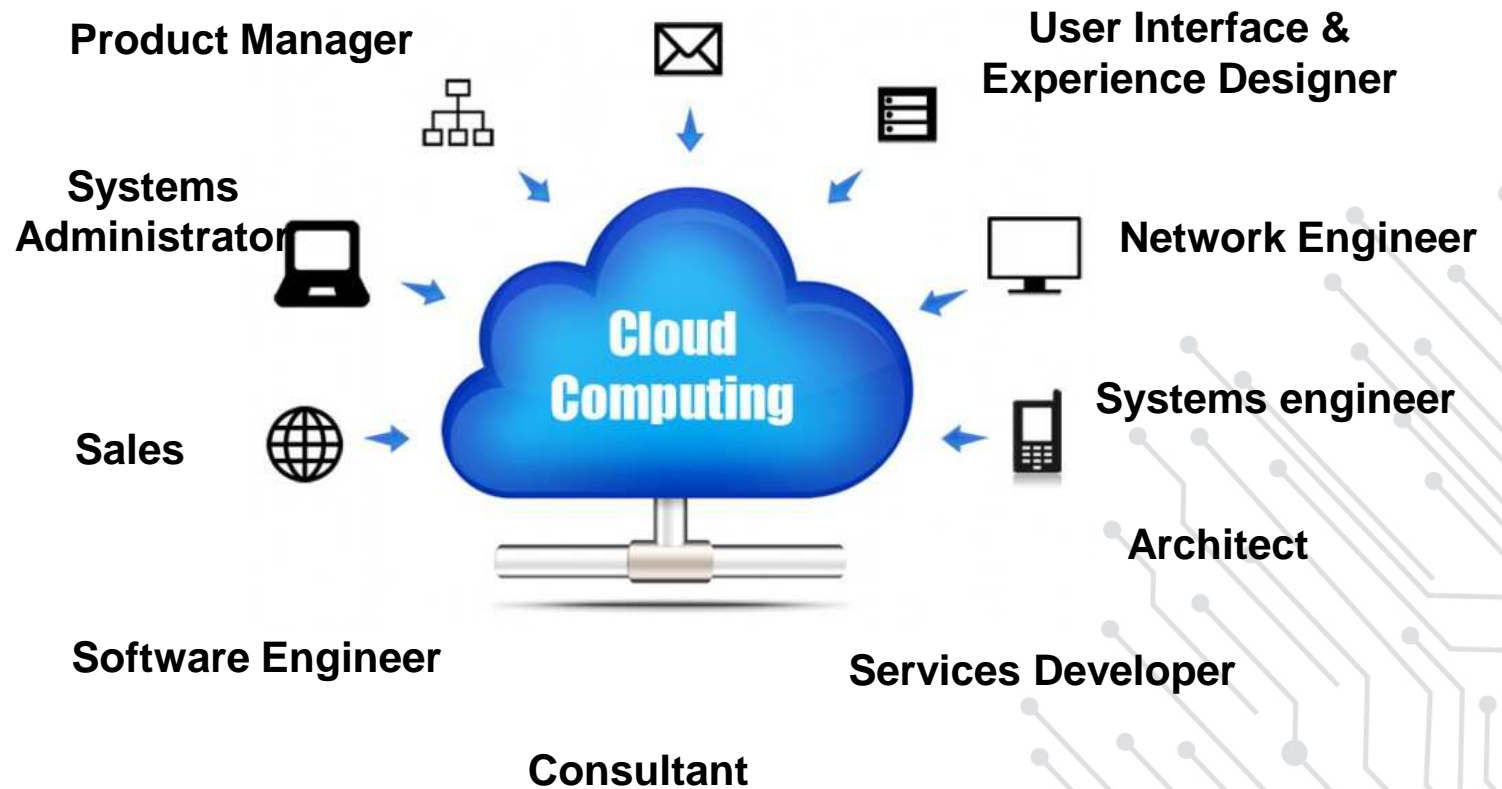
7 AEROSPACE ENGINEERS

buzz words:
unmanned drones, flying cars, drone delivery system



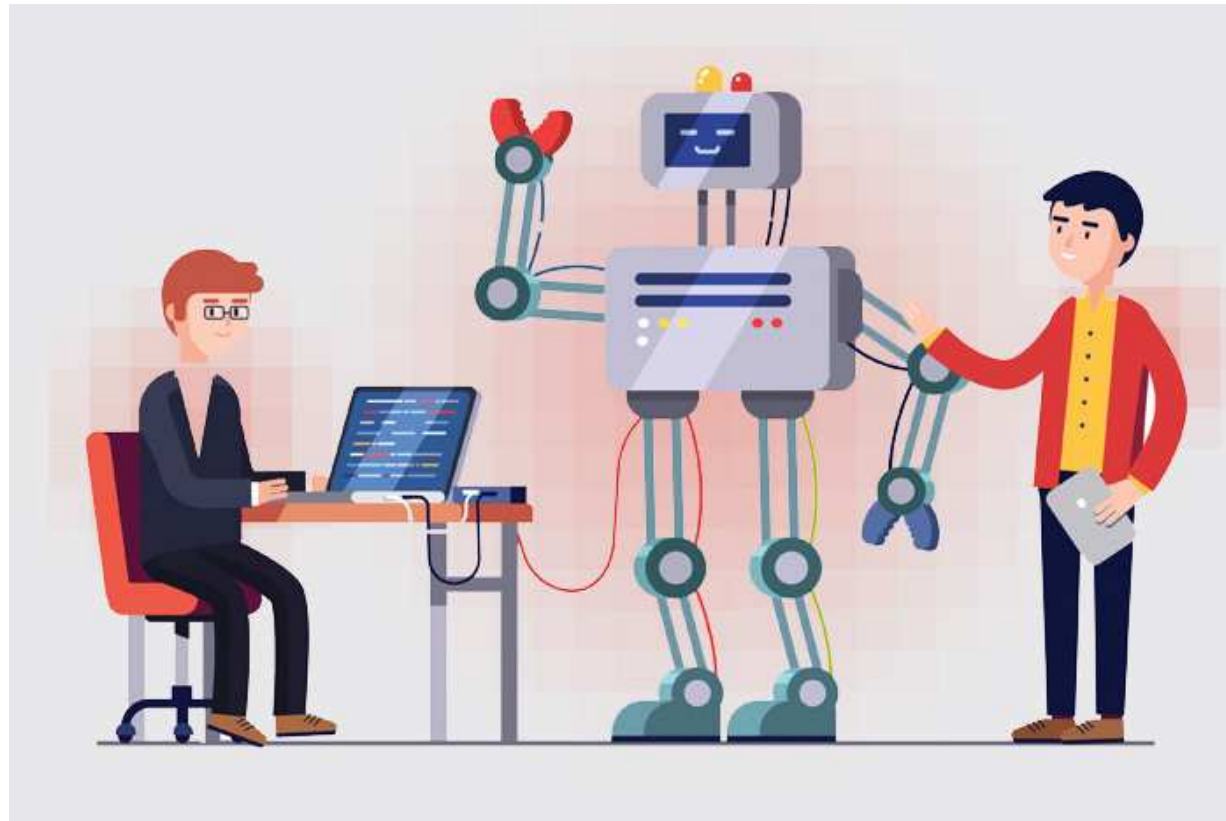
FUTURE JOBS

Cloud Computing.
How many jobs can you think of which are related to this technology?



FUTURE JOBS

Universities must ensure they offer 4IR relevant programmes.



(for example, Robotics Coding)

MINISTER OF HIGHER EDUCATION MANDATE 2018

HIGHER EDUCATION 4.0

KNOWLEDGE

INDUSTRY

HUMANITY

CLOSING

We must be brave in order to change.

We have been brave in redesigning our higher education system.

And now, we will once again show that we are brave and innovative enough to change for the 4th Industrial Revolution and beyond!

KEY TAKEAWAYS

Learning & Teaching 4.0

- **Learning Spaces**
- **Pedagogy (Heutagogy, Paragogy, Cybergogy)**
- **Fluid & organic curriculum**
- **Technologies**

Learning without lectures

Evaluation without examination

Knowledge without borders

New Jobs will be created

Industry and Academia are One

Ultimately it's meant for human beings

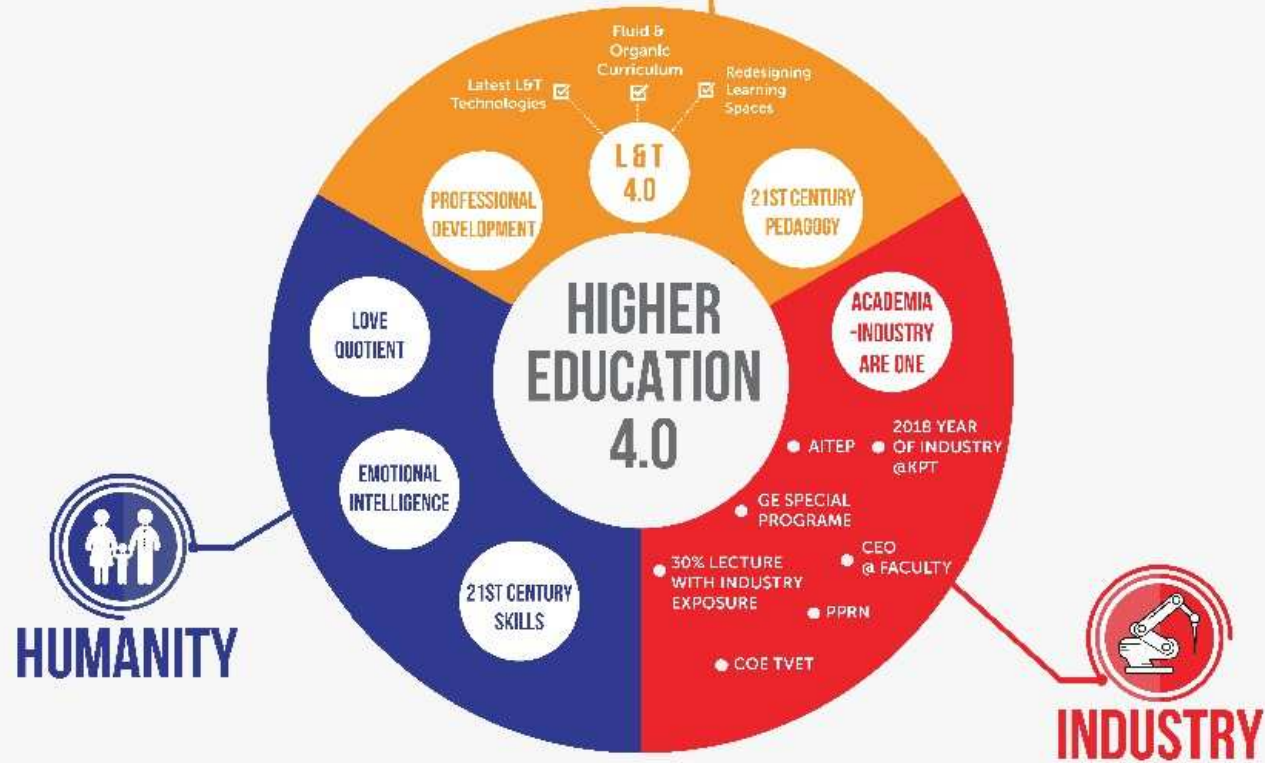
CLOSING

Dengan itu, marilah kita bersama-sama berdoa kepada Allah SWT agar segala perancangan dan pelaksanaan dapat direalisasikan.

Pelaksanaan ini juga perlu dibuat dengan penuh integriti dan etika agar perkhidmatan kita akan mendapat keberkatan-Nya.

**Semoga maju jaya.
Terima kasih. Thank you.**

KNOWLEDGE



FUTURE JOBS



CLOUD ARCHITECT



CLOUD SOFTWARE ENGINEER



CLOUD USER INTERFACE AND EXPERIENCE DESIGNER



CLOUD SALES



CLOUD ENGINEER



CLOUD SERVICES DEVELOPER



CLOUD SYSTEMS ADMINISTRATOR



CLOUD CONSULTANT



CLOUD SYSTEM ENGINEER



CLOUD NETWORK ENGINEER



CLOUD PRODUCT MANAGER



Higher Education 4.0: Knowledge, Industry, Humanity

MANDATE

MINISTER OF HIGHER EDUCATION

2018

