KNOWLEDGE TRANSFER IN INTERNATIONAL COLLABORATION BETWEEN JAPAN ADVANCED INSTITUTE OF SCIENCE AND TECHNOLOGY (JAIST) AND UNIVERSITI KEBANGSAAN MALAYSIA (UKM)

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November 10-12, 2015
Outline:

1. INTRODUCTION (JAIST & UKM)
2. JAIST - ASANO VISION 2020
3. UKM - KEY RESULTS AREAs
4. MAPPING BETWEEN VISION COMPONENT AND KRAs
5. JAIST & UKM COLLABORATION ACTIVITIES
6. STRATEGIES AND FRAMEWORK
7. CONCLUSION
INTRODUCTION-JAIST

• Japan Advanced Institute of Science and Technology (JAIST) was founded in October 1990 as the first independent national graduate school.

• 3 graduate schools, 11 other research centres in JAIST.

• JAIST has actively worked on international collaborations with overseas research institutes through collaborative research and education programs.

• In the span of 25 years, JAIST has concluded academic exchange agreements with 114 institutes from 30 countries.

• In the field of S&T, JAIST is the most internationalised academic institute in Japan and currently, more than 30% of its students and 20% of its faculty members come from abroad.
JAIST MISSION - ASANO VISION 2020

JAIST goals are:

1. To develop **leaders** in society or the industry who hold credible expertise in the frontier of science and technology, possess broad perspectives, a high level of autonomy, and communication ability, through its systematic, advanced graduate education.

2. To contribute to **societies** with research outcomes, create a centre of excellence for advancement of researches for solving problems of our world and society, and develop new fields through a variety of basic researches.

3. To foster active **global human resources** by promoting faculty and student exchanges with leading institutes overseas towards the **globalisation of education and research**.
**ASANO VISION 2020**

**Mission**
JAIST contributes to innovation in education and local community development by taking advantage of its characteristics as a graduate university, developing global human resources, taking an active role in the industry and the world, and pursuing research for the resolution of social issues in a combined disciplinary setting.

**Vision**
By 2020, JAIST will establish its position as a needs-oriented research university with integrated graduate schools. With a master's or doctoral degree and the intellectual toughness earned at JAIST, our graduates will become highly valued individual human resources playing an active role in industries anywhere in the world.

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<tr>
<th>Component 1</th>
<th>Component 2</th>
<th>Component 3</th>
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<tbody>
<tr>
<td>1. Education and Research/Student support</td>
<td>2. Social/International collaboration</td>
<td>3. Business management</td>
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<td>a. Pursuing advanced research for solutions to problems in society and the industry.</td>
<td>a. Contribute to the development of local community and society by returning the results of research to them.</td>
<td>a. Reinforce the governance function.</td>
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<td>b. By leveraging achievements in research, devise an integrated curriculum, based on the integrated graduate school system.</td>
<td>b. Expand collaborations with the industrial world.</td>
<td>b. Revise educational and research organisations.</td>
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<td>c. Develop human resources possessing intellectual toughness, specialisation and social adaptability.</td>
<td>c. Promote globalisation.</td>
<td>c. Reform the management system of personnel and salary.</td>
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<td>d. Distribute resources effectively, under the leadership of the President.</td>
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INTRODUCTION-UKM

• Universiti Kebangsaan Malaysia (UKM) was founded in May 18, 1970 and appointed as one of the five research universities in Malaysia in 2006 based on its excellent record in research.

• UKM has 13 faculties, a Graduate School of Business (GSB-UKM), as well as 16 research institutes of excellence in education.

• The role of UKM as the “guardian of the nation”

• Six Key Results Areas (KRAs) are introduced to ensure UKM is relevant, referred, and respected.
KRA#1: Nationally-Aspiring Graduates, Competent, Competitive, and Innovative

KRA#2: Highly Impactful Research and Innovation

KRA#3: Smart Partnerships and Strategic Engagement

KRA#4: Institution and Human Resource Excellence

KRA#5: Strategic and Optimum Wealth Generation

KRA#6: Conducive Infrastructure and Knowledge Environment
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<th>JAIST ASANO VISION 2020</th>
<th>UKM KEY RESULT AREA</th>
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<td>KRA 1</td>
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<td>Component 1 (C1)</td>
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<tr>
<td>Education and Research/Student support</td>
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<td>Component 2 (C2)</td>
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<td>Social/International collaboration</td>
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<td>Component 3 (C3)</td>
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<td>Business management</td>
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JAIST & UKM COLLABORATION ACTIVITIES

JAIST has concluded the Memorandum of Understanding (MoU) with 9 universities in Malaysia such as:

1. Universiti Malaysia Sarawak (UNIMAS) - 2010.5.26
2. Universiti Teknologi Malaysia (UTM) - 2010.6.25
3. Universiti Malaya (UM) - 2010.11.22
4. Universiti Teknologi Mara (UiTM) - 2011.12.19
5. Universiti Sains Malaysia (USM) - 2012.4.9
6. Universiti Kebangsaan Malaysia (UKM) - 2013.6.4
7. Universiti Teknikal Malaysia Melaka (UTeM) - 2013.6.11
8. Universiti Malaysia Sabah (UMS) - 2014.8.29
9. Universiti Tenaga Nasional (UNITEN) - 2015.5.13
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<tr>
<th>Types of collaboration</th>
<th>Activities</th>
<th>Component and KRA</th>
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| 1. International advanced seminar | • JAIST Symposium on Advanced Science and Technology, JAIST SAST (Nov 10-12, 2015) at JAIST.  
  ○ 2nd Malaysia-Japan Joint Symposium on Nanoelectronics 2015  
  ○ 3rd Malaysia-Japan Workshop on Advanced Science and Technology 2015  
• 1st Malaysia-Japan Joint Symposium on Nanotechnology 2014 (Dec 10-11, 2014) at IMEN, UKM.  
• 2nd Asean - Japan Workshop on Information Science and Technology (June 10 – 12, 2014) at FTSM, UKM.  
• 1st Malaysia-Japan Workshop on Advanced Technology for Information and Knowledge (June 3-6, 2013) at JAIST. | C2 (Social/International collaboration)  
KRA2 (Highly Impactful Research and Innovation)  
KRA3 (Smart Partnerships and Strategic Engagement) |

FTSM=Faculty of Information Science & Technology, UKM [School of Information Science, JAIST]  
IMEN=Institute of Microengineering and Nanoelectronics, UKM [School of Material Science, JAIST]
JAIST & UKM COLLABORATION ACTIVITIES

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| 2. Award/ Student internship | • 2 postgraduate interns from School of Information Science, JAIST will be doing their internship at FTSM, UKM (Dec, 2015)  
• JAIST has granted a program ‘JAIST 2016 Master Research Fellow for Malaysian Students’ in the area of advanced Science & Technology.  
• 3 postgraduate interns from FTSM, UKM are doing their internship at the School of Information Science, JAIST.  
• 6 postgraduate interns from IMEN, UKM are doing their internship at the School of Material Science, JAIST.  
• 5 undergraduate interns from FTSM, UKM are doing their internship at the School of Information Science, JAIST. | C1 (Education and Research/Student support)  
KRA1 (Nationally-Aspiring Graduates, Competent, Competitive, and Innovative) |

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### JAIST & UKM COLLABORATION ACTIVITIES

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<td>3. Course/s</td>
<td>Short course at FTSM, UKM on:</td>
<td>C2 (Social/International collaboration)</td>
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<td>• Formal Method - SAT / MAT Solvers (Dec 12, 2013).</td>
<td>KRA2 (Highly Impactful Research and Innovation)</td>
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<td>• Malware analysis (May 11, 2015).</td>
<td>KRA3 (Smart Partnerships and Strategic Engagement)</td>
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## JAIST & UKM COLLABORATION ACTIVITIES

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| 4. Academic and research programme     | • PhD research co-supervision between researchers from FTSM, UKM and School of Information Science, JAIST.  
• Postdoctoral research program at School of Information Science, JAIST.  
• Research visit to School of Information Science, JAIST.  
• Associate Editor (International) from JAIST for Asia-Pacific Journal of Information Technology and Multimedia (APJITM) of FTSM, UKM. | C1 (Education and Research/Student support)  
C2 (Social/International collaboration)  
KRA2 (Highly Impactful Research and Innovation)  
KRA3 (Smart Partnerships and Strategic Engagement)  
KRA4 (Institution and Human Resource Excellence)  
KRA6 (Conducive Infrastructure and Knowledge Environment) |

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Staff mobility programme

Periodic student exchange programme

Joint laboratory on research theme

Seminar/distinguished lecture

Joint degree programme
UKM & JAIST
CONCLUSION

• We shared best practices, expertise, infrastructure, and culture with respect to knowledge transfer from both institutions.
• We aim in achieving excellence in graduate education and research by combining the best competencies, teaching traditions and research environments in the two countries.
• The successful way to sustain excellence in international collaborations should be through clearly focused activities which will benefit fund application and improve impact in the long term.
• Strategic collaborations should be planned and managed in order to achieve the Asano Vision by 2020 and to support the KRAs of UKM.