

ABSTRACTS

2nd International Conference on Engineering of Tarumanagara

“Urban Engineering for Future Generation”

Jakarta, 22-23 October 2015

Auditorium M Building,
Campus I, Tarumanagara University
Jl. Letjen. S. Parman No. 1,
Jakarta 11440 - Indonesia



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41. Dr. Naniek Widayati Tarumanagara University, Indonesia
42. Dr. Titin Fatima Tarumanagara University, Indonesia

ABTRACTS

2nd International Conference on Engineering of Tarumanagara
(ICET)

“Urban Engineering For Future Generation”
Jakarta, 22-23 Oktober 2015

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**FACULTY OF ENGINEERING
TARUMANAGARA UNIVERSITY
JAKARTA-INDONESIA
2015**

FOREWORDS
CHAIRMAN OF THE ORGANIZING COMMITTEE

First of all let's pray and say thanks to God for giving us His mercy and blessings.

The development of technology nowadays is growing up so fast. It aims to meet the necessary of the community to get a better life. Technological innovation which needed to develop technology products that can help people in improving their lives. Therefore the academics are not only required to implement the learning process, but also have to do research and community service to produce innovative scientific research.

Indonesian academics today are eager to involve in research activities. Therefore we required a scientific forum for mutual discussion, exchange information about the research that has been carried out especially related to Urban Engineering.

Faculty of Engineering, University of Tarumanagara conducts the second international conference to bring the academics, researchers to develop their knowledge and exchange ideas so that the researchers can improve the results of research that has been done. The conference called the 2ndInternational Conference on Engineering Tarumanagara, 2015, which is held on the Auditorium at the 8th floor of M Building, Campus I, University of Tarumanagara from 22 to 23 October 2015. The ICET 2015 conference theme is Urban Engineering for Future Generations. Future generations as the frontier of national development should be prepared from now on, along with the necessary infrastructure. The role of technology is to support the enhancement of the ability of future generations. This event includes to the presentation of scientific papers by keynote speakers, parallel sessions presenting papers of academics and research poster exhibition.

The more extensive the information obtained, the more knowledge that we gained. Some papers submitted by researchers and academics from different countries such as, Germany, Malaysia will enrich the science and technological development.

This conference proceedings contain the full text of all papers presented International Conference on Engineering of Tarumanagara 2015. Papers are categorized based on Engineering disciplines set by the organizing committee. Then, the presentation is divided into parallel sessions.

On this occasion I would like to thank to: Foundation of Tarumanagara, Rector of Tarumanagara University, Dean of Faculty of Engineering Tarumanagara University and Sponsors of ICET 2015, for the support and help that has been given. I also would like to thank the authors for their contributions.

Finally I would like to apologies if there are deficiencies in the activity. Thank you for all the attention.

I Wayan Sukania, S.T., M.T.
Chairman of the Organizing Committee

FOREWORDS
DEAN OF FACULTY OF ENGINEERING

I would like to warmly welcome all participants of the 2nd International Conference on Engineering of Tarumanagara (ICET 2015). This conference is organized by Faculty of Engineering, Tarumanagara University. The main aim of this conference was to respond the problem related to urban engineering for future generation. As this conference was designed to gather scientists, engineers, practitioners, and industries in engineering related disciplines, I expect intense discussion will happen among them so that some brilliant ideas to be used to improve the quality of human life can be produced.

I hope this conference will create an international networking and collaborating, especially in engineering research and publication.

I would like to congratulate the organizing committee of ICET 2015, for their outstanding efforts. I would also like to express my gratitude to the sponsors for their contributions in making this conference a resounding success.

I wish the International Conference on Engineering of Tarumanagara (ICET 2015) a very useful and fruitful occasion.

Thank you for your attention and contribution.

Prof. Dr. Agustinus Purna Irawan
Dean of Faculty of Engineering

SCIENTIFIC COMMITTEE

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PROGRAM OVERVIEW

Thursday, 22 October 2015

No	Time	Program
1	08.30-09.00	Registration
2	09.00-09.30	Opening Ceremony
		a) Balinese Welcome Dance
		b) National Anthem + Mars Tarumanagara
		c) Chairman Speech
		d) Opening by Vice Rector of Academics and Student Affairs, Untar
		e) Photo Session (WRA, Dean, Chairman, Keynote Speakers, Presenters, Sponsors)
3	09.30-09.40	Sponsorship Presentation
4	09.40-11.40	Keynote Speaker 1: Prof. Zaidi Mohd. Ripin University Sain Malaysia, Malaysia
		Keynote Speaker 2: Ir. Irwansyah. Industrial Estate Association of Indonesia (Himpunan Kawasan Industri) Head of Environmental and Spatial Planning
5	11.40-11.50	Appreciation to Keynote Speakers, Moderator, Sponsors)
6	11.50-12.00	Sponsorship Presentation
7	12.00-12.10	Technical Information
8	12.10-13.00	Lunch
9	13.00-15.00	Parallel Session I
10	15.00-15.30	Coffee Break
11	15.30-17.00	Parallel Session II

Friday, 23 October 2015

No	Time	Program
1	08.30-09.00	Registration
2	09.00-11.00	Parallel Session III
3	11.00-11.15	Closing Ceremony
4	11.15-12.00	Lunch

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Invited Papers

Development of Low Frequency Electromagnetic Vibration Energy Harvester <i>Wan Masrurah Hairudin, M. Izudin Alisah, Chan Ping Yi, Tan Yee Hern, Zaidi Mohd Ripin</i>

List of Papers - Architecture

Paper ID	Title Author/Authors
AE-01	Catholic Church: Influence of Liturgical Ritual in the Building Design (Studied on Four Catholic Churches in DKI Jakarta Area) <i>Rudy Trisno, Sugiri Kustedja</i>
AE-02	Performance Analysis in Home Industry Scale Production of Modified Traditional Brick as Green Building Material With Reed as Filler <i>Kurniati Ornam, Masykur Kimsan, La Ode Ngkoimani</i>
AE-03	The Study of Defense Space on Chinatown Petak Sembilan, West Jakarta <i>Nafi'ah Solikhah</i>
AE-04	Survey on the Fulfillment of the Construction Requirements for Non-Engineered Houses in North Sumatra <i>Darwin</i>
AE-05	Reveal Knowledge Pacitan Rural Java Architecture <i>Triyuniastuti, HB Satrio Wibowo, Sukirman</i>
AE-06	Uniqueness Omah Dudur Dawa Architecture <i>Satrio HB Wibowo, Sudaryono, E. Pradipto</i>
AE-07	Global and Local, at the Same Time <i>Franky Liauw</i>
AE-08	Conducting Smart Programs in the Old Kampoeng Beyond the Modern Era City of Surabaya <i>Danny Santoso Mintorogo Wanda K. Widigdo, Liliany S. Arifin, Anik Yuniwati</i>
AE-09	Adaptation to Climate Change as the Controller of Disaster Vulnerability in Coastal Settlements in Mempawah Hilir, West Kalimantan <i>Ely Nurhidayati</i>
AE-10	Study of Staircases Design and Visitors' Perception at Commercial Building <i>Siti Belinda Amri, Santi, La Ode Abdul Syukur, Aspin</i>
AE-11	Greenship Rating of Wood Materials in Building <i>James Rilatupa</i>
AE-12	Study of Bioclimatic Application to the Spatial Habitation Along the River Bank Ciliwung <i>Handajani Asriningpuri, Ratih Budiarti, Harlisa</i>
AE-13	Public Engagement in Public Space as the Elements of City Branding <i>Olga Nauli Komala</i>

Paper ID	Title Author/Authors
AE-14	Bornean Long House: Cosmological Value in Socio-Cultural Transformation Stream <i>Klara Puspa Indrawati</i>
AE-15	Potential Tour Toward Village of Cultural Conservation of Baluwerti, Surakarta, Jawa Tengah, Indonesia <i>Naniek Widayati Priyomarsono</i>

List of Papers - Civil Engineering

Paper ID	Title/Author/Authors
CE-01	The Understanding and the Use of Motorcycle Special Stopping Space in Signalized Intersection <i>Leksmono Suryo Putranto, Minggaza Suhindra</i>
CE-02	Identification of Volcanic Rocks in Imogiri Yogyakarta Based on Subsurface Geologic Data <i>Winarti, Hill Gendoet Hartono</i>
CE-03	Model Test of Influence Groundwater Pumping to Decrease Surface of the Land <i>Nurnawaty, M. Selintung, M.Arsyad Thaha, F. Marikar</i>
CE-04	Analysis on the Needs of Bike Share in Institut Teknologi Sepuluh Nopember Surabaya <i>Siera Rozanah, Ervina Ahyudanari</i>
CE-05	Flexural Behavior of Bamboo Reinforced Concrete Beams <i>Ika Bali, Erianto Wijaya</i>
CE-06	Identification of Hazardous Road Sections Using Over Dispersion-Excess Zero Data of Vehicle Accident at Johor Federal Roads <i>Joewono Prasetijo, W Zahidah Musa, Zaffan Farhana Zainal</i>
CE-07	Speed Profile Based on Design Consistency <i>Joewono Prasetijo, Zaffan Farhana Zainal, W. Zahidah Musa</i>
CE-08	DAB as an Effective Dispute Resolution in Construction Industry <i>Purnomo</i>
CE-09	Analysis Energy Consumption and Price of Fuel Truck in Makassar <i>Mukhtar Lutfie, Lawalenna Samang, Sakti Adji Adisasmita, Isran Ramli</i>
CE-10	Influence of Economic External Factors on Construction Project Duration Identification <i>Basuki Anondho, Yusi Yusianto, Jemmy Wijaya</i>
CE-11	Analysis of the Influence of Longitudinal Beam Toward the Concrete's Nominal Shear Strength <i>Daniel Christianto, Fannywati Itang, Widodo Kushartomo, and Irene Natasha Kosasih</i>
CE-12	Stabilization of Marine Dredged Sediment With Hydraulic Binders and Silica Fume <i>Ernesto Silitonga</i>

List of Papers - Electrical Engineering

Paper ID	Title/Author/Authors
EE-01	Sentiment Classification for Academic Questionnaire Using NBC and SVM <i>Amir Hamzah, Naniek Widyastuti</i>
EE-02	GUI Applications on Ground Segment Research Rockets <i>Imam Sampurno Nugroho, Yahan Nuryad, Nanniek Andiani, Yohannes Dewanto</i>
EE-03	Document Subjectivity and Target Detection in Opinion Mining Using HMM Pos-Tagger <i>Amir Hamzah, Naniek Widyastuti</i>
EE-04	Analysis, Simulation and Implementation of Linear Block Codes Using a Microcontroller <i>Joni Fat</i>
EE-05	Visual Performance of Tunnel Lighting Along the Jakarta Outer Ring Road <i>Endah Setyaningsih, Jeanny Pragantha</i>
EE-06	Microcontroller Based Speed Controller of One Phase Induction AC Motor in Escalators <i>Hadian Satria Utama, Edward Naulibasa Lie, Pono Budi Marjoko</i>
EE-07	Implementation Hadoop on Private IaaS Cloud Computing <i>Edy Kristianto</i>

List of Papers - Industrial Engineering

Paper ID	Title/Author/Authors
IE-01	Rapid Tooling Manufacturability Advanced Materials Using Automation Fuzzy-AHP Method for Injection Gyro-Magnetic Hot Mold <i>Moh. Hardiyanto</i>
IE-02	Workload Analysis of Manually Operator at Clean and Tidy Car Wash <i>Indra Surianto, I Wayan Sukania and Lamto Widodo</i>
IE-03	Designing a "Voice of Customer" Program to Support Knowledge-Based-QFD <i>Ronald Sukwadi, Mokh. Suef, Enny Widawati, Cynthia Giovany</i>
IE-04	The Strategy for Improving the Quality of Printing Film Production at PT X <i>Lithrone Laricha S, Delvis Agusman, Lucky</i>
IE-05	Research Comparison Among Business Incubator Research Sample and Analysis in the World <i>Lina Gozali, Maslin Masrom, Habibah @ Norehan Haron, Teuku Yuri M. Zagloel</i>
IE-06	Developing Algorithm to Design Jig & Fixture in SME Supporting Industry Based on Quality Function Deployment Methods (Case Study: Design Assy Machine and Leakage Testing Machine for Air Brake Coupling Hose) <i>Cucu Wahyudin, Aan Mintarsih</i>
IE-07	Comparison of Modular Layout and Distributed Layout Using Simulation Approach <i>Trifenaus Prabu Hidayat, Andre Sugioko</i>
IE-08	Optimization Replacement Schedule of Chisels Based on Quality Cost With Exponentially Increasing Failure Rate <i>Dadang Arifin</i>
IE-09	Re-Design The High of Handlebar on Semarang's Bus Rapid Transit Using Anthropometry and Ergonomy Approach <i>Annisia Lutfiah Hatuwe, Annisa Nindya Putri, Hanung Kurniawan, Reza Prisman</i>

Paper ID	Title/Author/Authors
IE-10	Optimization of Production Planning Using Goal Programming Method (Study in a Cement Plant) <i>Syamsul Anwar, Lonny Afrizalmi</i>
IE-11	Risk Assessment of Distal Upper Extremity by Strain Index Method in a Small Shoes-Making Industry <i>Syamsul Anwar, Yuri Fandi Tanjung</i>
IE-12	The Effect of Working Environment Conditions on Employees' Job Satisfaction in a Palm Oil Industry <i>Elsa Febriani, Musdirwan, Syamsul Anwar</i>
IE-13	Improvement of Service Performance in PO. Sandy Putra by Implementation of Safety Management System for Public Transport <i>Hanung Kurniawan</i>
IE-14	Designing a Closed Loop Tutelage System to Support Student in Preparing and Executing the Study Plan <i>Andrijanto</i>
IE-15	Design of Eco-Friendly Dairy Farm Business Plan Using Business Canvas Model <i>Meity Martaleo, William Bobby Susanto, Marcellia Susan</i>
IE-16	Heuristic Model With Discretized Time Horizon for Solving Alternative Machine Scheduling Problem on Single Operation <i>Irwan Sukendar</i>
IE-17	Simulator of Pitot Tube, Using The Sensor MPX5100 in an Aircraft Model <i>Joko Sugiarto, Dwijati, Hendardi, Yohannes Dewanto</i>
IE-18	Ergonomic Aspect of Physical Environment in Junior High School (Between Individual Comfort and Saving Energy Behavior) <i>Lamto Widodo, Fransisca Iriani, Endah Setyaningsih</i>
IE-19	Embodiment Design of High Capacity Mixer (Case Study : Steamed Sponge Cake Production at "M" Home Industry) <i>Adrian Christiady, Vivi Triyanti</i>
IE-20	The Comparison of MTM-1 and MOST in Predicting Work Element Time <i>Ivana Theresia Libardus, Vivi Triyanti</i>

List of Papers - Mechanical Engineering

Paper ID	Title/Author/Authors
ME-01	Study of the Phenomenon of Collapse and Buckling the Car Body Frame <i>Didik Sugiyanto, Audri Deacy Cappeberg</i>
ME-02	Model Reduction Methods for Cracked Rotor Dynamics Analysis <i>Ruggeri Toni Liong</i>
ME-03	Design and Construction of a Prototype of Screw Press for the Collection of Coconut Milk <i>I Wayan Surata, Tjokorda Gde Tirta Nindhia, Davied Budyanto, Ahmad Eko Yulianto</i>
ME-04	Assessment of Outside Air Supply for Split AC System. Part B: Experiment <i>K. D. Putra, A. Bimaridi, E. Djunaedy</i>

Paper ID	Title/Author/Authors
ME-05	Assessment of Outside Air Supply for Split AC System. Part A: Affordable Instrumentation <i>A. Bimaridi, K. D. Putra, E. Djunaedy</i>
ME-06	Analysis Energy Usage and OTTV in the University Building <i>Suci, Ery Djunaedy, M. Ramdhan Kirom</i>
ME-07	Effect of Tool Nose Radius on Surface Roughness for Machining ST 60 Steel Using Carbide Inserts <i>Sobron Lubis, Erwin Siahaan, Teguh Imam Suyatno</i>
ME-08	Design Can Cover for Feeding Conveyor for Closing Cans in Cans Machine Maker <i>Gusti Ryandi Arief, Agung, Wina Libyawati, Yohannes Dewanto</i>
ME-09	Design of Cessna Aircraft Model JD - 010 Use Scale 8:1 Based Radio Control <i>Muhammad Ahda, Ahmad Ilham Firdaus, Erick H.K., Yohannes Dewanto</i>
ME-10	Magnet for Generate Electric Power Applications <i>Dzulfi S Prihartanto, Alva Abdul Ganis, I.G.Eka Lesmana</i>
ME-11	Dynamic Analysis on Conditions For Stay off Airfoil, Flying and Landing <i>Bismil Rebetta, Aprilia Sakti, Erick H.K.</i>
ME-12	Simulation of Non-Newtonian Fluid Flow Through Encapsulation of 3-Dimensional Stacked Flip-Chip Package Using Lattice Boltzmann Method <i>M.H.H. Ishak, M.Z. Abdullah, Aizat Abas, M.I. Ismail, M.S. Mohamad</i>
ME-13	Cyclone Turbine Ventilator as a Power Source Lamps for Home Lighthing <i>Jenny Delly, Welly Liku Padang, Baso Mursidi, Budiman Sudia</i>
ME-14	Finite Element Analysis of Modified In-Wheel Electric Motor for Hybrid Electric Motorcycle <i>Didi Widya Utama</i>
ME-15	Pathological Tremor Measurement and Reproduction <i>Ping Yi Chan, Zaidi Mohd Ripin</i>
ME-16	FSI Analysis on the Effect of Membrane Rigidity on Laminar Flow Separation Over NACA 64 ₃ -218 Airfoil <i>M.S. Abdul Aziz, M.Z. Abdullah, S.M. Firdaus, H. Yusoff, K.A. Ahmad, M. Zubair</i>
ME-17	Analysis Ethyl Ester in Biodiesel of Raw Material Waste Coconut Oil and Arak <i>I Wayan Bandem Adnyana, Ni Made Suaniti</i>
ME-18	Design and Development of Quadcopter Prototype <i>Riyan Fenaldo Alphonso, Agustinus Purna Irawan, Frans Jusuf Daywin</i>
ME-19	Experimental Investigation on Electronic Cooling Performance Using Porous Medium Heat Sink <i>Muhammad Zaakir Angsoommuddin, Mohd Zulkifly Abdullah, Third Author</i>
ME-20	Tensile Strength Polymer Matrix Composite With Reinforcement Gigantochloa Apus <i>Sofyan Djamil, Mohamed Azlan Suhot, Mohd Zaki Hasan</i>
ME-21	Effectivity of Heat Exchanger Using Coolant Fluid <i>Harto Tanujaya</i>
ME-22	Alitizing Process of Low Alloy Steel Emergency Doors in High Rise Building <i>Erwin Siahaan</i>

List of Papers - Urban Engineering

Paper ID	Title/Author/Authors
UE-01	Decision Design Support System of Urban Landscape Planning Using 3D Interactive Visualization <i>Herry Santosa, Shinji Ikaruga, Takeshi Kobayashi</i>
UE-02	Sustainability Level of Settlement in Gajah Wong Riverside Area, Kotagede, Yogyakarta <i>Abraham Bhaskara Singgih</i>
UE-03	Urban Sprawl Effect to Sustainable City <i>Andas Budy</i>
UE-04	Arrangement Model on the Sustainable Coastal Settlement in Makassar <i>Naidah Naing, Asdar Djamereng, Bulgis</i>
UE-05	Implementation for Optimizing the Turnkey Project Scheme in Highrise Buiding/Flat Development Base on Duration and Interest Rate <i>Sylvie Wirawati, Ricky Pittra Halim</i>
UE-06	Spatial Articulation and Coexistence of Mode of Production in the Dynamics of Development at the Urban Fringe of Makassar City <i>Batara Surya</i>

PARALLEL SESSION SCHEDULE
22 October 2015

ROOM : 1
MODERATOR : Klara Puspa Indrawati, S.T., M.Ars.
SESSION : 1

No.	Time	Paper ID	Title/Author/Authors
1	13.00-13.15	AE-02	Performance Analysis in Home Industry Scale Production of Modified Traditional Brick as Green Building Material With Reed as Filler <i>Kurniati Ornam, Masykur Kimsan, La Ode Ngkoimani</i>
2	13.15-13.30	AE-10	Study of Staircases Design and Visitors' Perception at Commercial Building <i>Siti Belinda Amri, Santi, La Ode Abdul Syukur, Aspin</i>
3	13.30-13.45	AE-11	Greenship Rating of Wood Materials in Building <i>James Rilatupa</i>
4	13.45-14.00	AE-12	Study of Bioclimatic Application to the Spatial Habitation Along the River Bank Ciliwung <i>Handajani Asriningpuri, Ratih Budiarti, Harlisa</i>
5	14.00-14.15	AE-14	Bornean Long House: Cosmological Value in Socio-Cultural Transformation Stream <i>Klara Puspa Indrawati</i>
6	14.15-14.30	AE-15	Potential Tour Toward Village of Cultural Conservation of Baluwerti, Surakarta, Jawa Tengah, Indonesia <i>Naniek Widayati Priyomarsono</i>
7	14.30-14.45	UE-03	Urban Sprawl Effect to Sustainable City <i>Andas Budy</i>
8	14.45-15.00	UE-04	Arrangement Model on the Sustainable Coastal Settlement in Makassar <i>Naidah Naing, Asdar Djamereng, Bulgis</i>

PARALLEL SESSION SCHEDULE
22 October 2015

ROOM : 1
MODERATOR : Ir. Hadian Satria Utama, MSEE
SESSION : 2

No.	Time	Paper ID	Title/Author/Authors
1	13.00-13.15	UE-05	Implementation for Optimizing the Turnkey Project Scheme in Highrise Buiding/Flat Development Base on Duration and Interest Rate <i>Sylvie Wirawati, Ricky Pittra Halim</i>
2	13.15-13.30	UE-06	Spatial Articulation and Coexistence of Mode of Production in the Dynamics of Development at the Urban Fringe of Makassar City <i>Batara Surya</i>
3	13.30-13.45	EE-01	Sentiment Classification for Academic Questionnaire Using NBC and SVM <i>Amir Hamzah, Naniek Widyastuti</i>
4	13.45-14.00	EE-04	Analysis, Simulation and Implementation of Linear Block Codes Using a Microcontroller <i>Joni Fat</i>
5	14.00-14.15	EE-05	Visual Performance of Tunnel Lighting Along the Jakarta Outer Ring Road <i>Endah Setyaningsih, Jeanny Pragantha</i>
6	14.15-14.30	EE-06	Microcontroller Based Speed Controller of One Phase Induction AC Motor in Escalators <i>Hadian Satria Utama, Edward Naulibasa Lie, Pono Budi Marjoko</i>
7	14.30-14.45	EE-07	Implementation Hadoop on Private IaaS Cloud Computing <i>Edy Kristianto</i>

PARALLEL SESSION SCHEDULE
22 October 2015

ROOM : 2
MODERATOR : Dr. Widodo Kushartomo, S.Si., M.Si.
SESSION : 1

No.	Time	Paper ID	Title/Author/Authors
1	13.00-13.15	CE-01	The Understanding and the Use of Motorcycle Special Stopping Space in Signalized Intersection <i>Leksmono Suryo Putranto, Minggaza Suhindra</i>
2	13.15-13.30	CE-02	Identification of Volcanic Rocks in Imogiri Yogyakarta Based on Subsurface Geologic Data <i>Winarti, Hill Gendoet Hartono</i>
3	13.30-13.45	CE-03	Model Test of Influence Groundwater Pumping to Decrease Surface of the Land <i>Nurnawaty, M. Selintung, M.Arsyad Thaha, F. Marikar</i>
4	13.45-14.00	CE-05	Flexural Behavior of Bamboo Reinforced Concrete Beams <i>Ika Bali, Erianto Wijaya</i>
5	14.00-14.15	CE-06	Identification of Hazardous Road Sections Using Over Dispersion-Excess Zero Data of Vehicle Accident at Johor Federal Roads <i>Joewono Prasetijo, W Zahidah Musa, Zaffan Farhana Zainal</i>
6	14.15-14.30	CE-07	Speed Profile Based on Design Consistency <i>Joewono Prasetijo, Zaffan Farhana Zainal, W. Zahidah Musa</i>
7	14.30-14.45	CE-09	Analysis Energy Consumption and Price of Fuel Truck in Makassar <i>Mukhtar Lutfie, Latwalenna Samang, Sakti Adji Adisasmita, Isran Ramli</i>
8	14.45-15.00	CE-11	Analysis of the Influence of Longitudinal Beam Toward the Concrete's Nominal Shear Strength <i>Daniel Christianto, Fannywati Itang, Widodo Kushartomo, and Irene Natasha Kosasih</i>

PARALLEL SESSION SCHEDULE
22 October 2015

ROOM : 2
MODERATOR : Dr. Ir. M. Sobron Yamin Lubis, M.Sc
SESSION : 2

No.	Time	Paper ID	Title/Author/Authors
1	13.00-13.15	ME-02	Model Reduction Methods for Cracked Rotor Dynamics Analysis <i>Ruggerri Toni Liong</i>
2	13.15-13.30	ME-12	Simulation of Non-Newtonian Fluid Flow Through Encapsulation of 3-Dimensional Stacked Flip-Chip Package Using Lattice Boltzmann Method <i>M.H.H. Ishak, M.Z. Abdullah, Aizat Abas, M.I. Ismail, M.S. Mohamad</i>
3	13.30-13.45	ME-13	Cyclone Turbine Ventilator as a Power Source Lamps for Home Lighting <i>Jenny Delly, Welly Liku Padang, Baso Mursidi, Budiman Sudia</i>
4	13.45-14.00	ME-15	Pathological Tremor Measurement and Reproduction <i>Ping Yi Chan, Zaidi Mohd Ripin</i>
5	14.00-14.15	ME-07	Effect of Tool Nose Radius on Surface Roughness for Machining ST 60 Steel Using Carbide Inserts <i>Sobron Lubis, Erwin Siahaan, Teguh Imam Suyatno</i>
6	14.15-14.30	ME-16	FSI Analysis on the Effect of Membrane Rigidity on Laminar Flow Separation Over NACA 64 ₃ -218 Airfoil <i>M.S. Abdul Aziz, M.Z. Abdullah, S.M. Firdaus, H. Yusoff, K.A. Ahmad, M. Zubair</i>
7	14.30-14.45	ME-19	Experimental Investigation on Electronic Cooling Performance Using Porous Medium Heat Sink <i>Muhammad Zaakir Angsoommuddin, Mohd Zulkifly Abdullah, Third Author</i>
8	14.45-15.00	ME-20	Tensile Strength Polymer Matrix Composite With Reinforcement Gigantochloa Apus <i>Sofyan Djamil, Mohamed Azlan Suhot, Mohd Zaki Hasan</i>

PARALLEL SESSION SCHEDULE
22 October 2015

ROOM : 3
MODERATOR : Dr. Lamto Widodo, S.T., M.T.
SESSION : 1

No.	Time	Paper ID	Title/Author/Authors
1	13.00-13.15	IE-01	Rapid Tooling Manufacturability Advanced Materials Using Automation Fuzzy-AHP Method for Injection Gyro-Magnetic Hot Mold <i>Moh. Hardiyanto</i>
2	13.15-13.30	IE-03	Designing a "Voice of Customer" Program to Support Knowledge-Based-QFD <i>Ronald Sukwadi, Mokh. Suef, Enny Widawati, Cynthia Giovany</i>
3	13.30-13.45	IE-06	Developing Algoritn to Design Jig & Fixture in SME Supporting Industry Based on Quality Function Deployment Methods (Case Study: Design Assy Machine and Leakage Testing Machine for Air Brake Coupling Hose) <i>Cucu Wahyudin, Aan Mintarsih</i>
4	13.45-14.00	IE-07	Comparison of Modular Layout and Distributed Layout Using Simulation Approach <i>Trifenaus Prabu Hidayat, Andre Sugioko</i>
5	14.00-14.15	IE-08	Optimization Replacement Schedule of Chisels Based on Quality Cost With Exponentially Increasing Failure Rate <i>Dadang Arifin</i>
6	14.15-14.30	IE-09	Re-Design The High of Handlebar on Semarang's Bus Rapid Transit Using Anthropometry and Ergonomy Approach <i>Annissa Lutfiah Haturwe, Annisa Nindya Putri, Hanung Kurniawan, Reza Prisman</i>
7	14.30-14.45	IE-13	Improvement of Service Performance in PO. Sandy Putra by Implementation of Safety Management System for Public Transport <i>Hanung Kurniawan</i>
8	14.45-15.00	IE-14	Designing a Closed Loop Tutelage System to Support Student in Preparing and Executing the Study Plan <i>Andrijanto</i>

PARALLEL SESSION SCHEDULE
22 October 2015

ROOM : 3
MODERATOR : Harto Tanujaya, S.T., M.T., Ph.D.
SESSION : 2

No.	Time	Paper ID	Title/Author/Authors
1	13.00-13.15	IE-16	Heuristic Model With Discretized Time Horizon for Solving Alternative Machine Scheduling Problem on Single Operation <i>Irwan Sukendar</i>
2	13.15-13.30	IE-19	Embodiment Design of High Capacity Mixer (Case Study: Steamed Sponge Cake Production at "M" Home Industry) <i>Adrian Christiady, Vivi Triyanti</i>
3	13.30-13.45	IE-20	The Comparison of MTM-1 and MOST in Predicting Work Element Time <i>Ivana Theresia Libardus, Vivi Triyanti</i>
4	13.45-14.00	ME-04	Assessment of Outside Air Supply for Split AC System. Part B: Experiment <i>K. D. Putra, A. Bimaridi, E. Djunaedy</i>
5	14.00-14.15	ME-05	Assessment of Outside Air Supply for Split AC System. Part A: Affordable Instrumentation <i>A. Bimaridi, K. D. Putra, E. Djunaedy</i>
6	14.15-14.30	ME-03	Design and Construction of a Prototype of Screw Press for the Collection of Coconut Milk <i>I Wayan Surata, Tjokorda Gde Tirta Nindhia, Davied Budyanto, Ahmad Eko Yulianto</i>
7	14.30-14.45	ME-14	Finite Element Analysis of Modified In-Wheel Electric Motor for Hybrid Electric Motorcycle <i>Didi Widya Utama</i>
8	14.45-15.00	ME-17	Analysis Ethyl Ester in Biodiesel of Raw Material Waste Coconut Oil and Arak <i>I Wayan Bandem Adnyana, Ni Made Suaniti</i>
9	15.00-15.15	ME-18	Design and Development of Quadcopter Prototype <i>Riyan Fenaldo Alphonso, Agustinus Purna Irawan, Frans Jusuf Daywin</i>
10	15.15-15.30	ME-21	Effectivity of Heat Exchanger Using Coolant Fluid <i>Harto Tanujaya</i>

PARALLEL SESSION SCHEDULE
23 October 2015

ROOM : 1
MODERATOR : Mekar Sari, S.T., M.Sc.
SESSION : 3

No.	Time	Paper ID	Title/Author/Authors
1	09.00-09.15	AE-01	Catholic Church: Influence of Liturgical Ritual in the Building Design (Studied on Four Catholic Churches in DKI Jakarta Area) <i>Rudy Trisno, Sugiri Kustedja</i>
2	09.15-09.30	AE-03	The Study of Defense Space on Chinatown Petak Sembilan, West Jakarta <i>Nafi'ah Solikhah</i>
3	09.30-09.45	AE-04	Survey on the Fulfillment of the Construction Requirements for Non-Engineered Houses in North Sumatra <i>Darwin</i>
4	09.45-10.00	AE-05	Reveal Knowledge Pacitan Rural Java Architecture <i>Triyuniastuti, HB Satrio Wibowo, Sukirman</i>
5	10.00-10.15	AE-06	Uniqueness Omah Dudur Dawa Architecture <i>Satrio HB Wibowo, Sudaryono, E. Pradipto</i>
6	10.15-10.30	AE-07	Global and Local, at the Same Time <i>Franky Liauw</i>
7	10.30-10.45	AE-08	Conducting Smart Programs in the Old Kampoeng Beyond the Modern Era City of Surabaya <i>Danny Santoso Mintorogo Wanda K. Widigdo, Liliany S. Arifin, Anik Yuniwati</i>
8	10.45-11.00	AE-09	Adaptation to Climate Change as the Controller of Disaster Vulnerability in Coastal Settlements in Mempawah Hilir, West Kalimantan <i>Ely Nurhidayati</i>
9	11.00-11.15	AE-13	Public Engagement in Public Space as the Elements of City Branding <i>Olga Nauli Komala</i>

PARALLEL SESSION SCHEDULE
23 October 2015

ROOM : 2
MODERATOR : Ir. Sofyan Djamil, M.Sc
SESSION : 3

No.	Time	Paper ID	Title/Author/Authors
1	09.00-09.15	CE-10	Influence of Economic External Factors on Construction Project Duration Identification <i>Basuki Anondho, Yusi Yusianto, Jemmy Wijaya</i>
2	09.15-09.30	ME-06	Analysis Energy Usage and OTTV in the University Building <i>Suci, Ery Djunaedy, M. Ramdhan Kirom</i>
3	09.30-09.45	ME-08	Design Can Cover for Feeding Conveyor for Closing Cans in Cans Machine Maker <i>Gusti Ryandi Arief, Agung, Wina Libyawati, Yohannes Dewanto</i>
4	09.45-10.00	ME-09	Design of Cessna Aircraft Model JD - 010 Use Scale 8:1 Based Radio Control <i>Muhammad Ahda, Ahmad Ilham Firdaus, Erick H.K., Yohannes Dewanto</i>
5	10.00-10.15	ME-10	Magnet for Generate Electric Power Applications <i>Dzulfi S Prihartanto, Alva Abdul Ganis, I.G.Eka Lesmana</i>
6	10.15-10.30	ME-11	Dynamic Analysis on Conditions For Stay off Airfoil, Flying and Landing <i>Bismil Rebeta, Aprilia Sakti, Erick H.K.</i>
7	10.30-10.45	ME-01	Study of the Phenomenon of Collapse and Buckling the Car Body Frame <i>Didik Sugiyanto, Audri Deacy Cappeberg</i>
8	10.45-11.00	ME-22	Alitizing Process of Low Alloy Steel Emergency Doors in High Rise Building <i>Erwin Siahaan</i>

PARALLEL SESSION SCHEDULE
23 October 2015

ROOM : 3
MODERATOR : M. Agung Saryatmo, S.T., M.M.
SESSION : 3

No.	Time	Paper ID	Title/Author/Authors
1	09.00-09.15	IE-02	Workload Analysis of Manually Operator at Clean and Tidy Car Wash <i>Indra Surianto, I Wayan Sukania and Lamto Widodo</i>
2	09.15-09.30	IE-04	The Strategy for Improving the Quality of Printing Film Production at PT X <i>Lithrone Laricha S, Delvis Agusman, Lucky</i>
3	09.30-09.45	IE-05	Research Comparison Among Business Incubator Research Sample and Analysis in the World <i>Lina Gozali, Maslin Masrom, Habibah @ Norehan Haron, Teuku Yuri M. Zagloel</i>
4	09.45-10.00	IE-10	Optimization of Production Planning Using Goal Programming Method (Study in a Cement Plant) <i>Syamsul Anwar, Lonny Afrizalmi</i>
5	10.00-10.15	IE-11	Risk Assessment of Distal Upper Extremity by Strain Index Method in a Small Shoes-Making Industry <i>Syamsul Anwar, Yuri Fandi Tanjung</i>
6	10.15-10.30	IE-12	The Effect of Working Environment Conditions on Employees' Job Satisfaction in a Palm Oil Industry <i>Elsa Febriani, Musdirwan, Syamsul Anwar</i>
7	10.30-10.45	IE-15	Design of Eco-Friendly Dairy Farm Business Plan Using Business Canvas Model <i>Meity Martaleo, William Bobby Susanto, Marcellia Susan</i>
8	10.45-11.00	IE-17	Simulator of Pitot Tube, Using The Sensor MPX5100 in an Aircraft Model <i>Joko Sugiarto, Dwijati, Hendardi, Yohannes Dewanto</i>
9	11.00-11.15	IE-18	Ergonomic Aspect of Physical Environment in Junior High School (Between Individual Comfort and Saving Energy Behavior) <i>Lamto Widodo, Fransisca Iriani, Endah Setyaningsih</i>

PARALLEL SESSION SCHEDULE
23 October 2015

ROOM : 4
MODERATOR : I Wayan Sukania, S.T., M.T.
SESSION : 3

No.	Time	Paper ID	Title/Author/Authors
1	09.00-09.15	UE-01	Decision Design Support System of Urban Landscape Planning Using 3D Interactive Visualization <i>Herry Santosa, Shinji Ikaruga, Takeshi Kobayashi</i>
2	09.15-09.30	UE-02	Sustainability Level of Settlement in Gajah Wong Riverside Area, Kotagede, Yogyakarta <i>Abraham Bhaskara Singgih</i>
3	09.30-09.45	CE-04	Analysis on the Needs of Bike Share in Institut Teknologi Sepuluh Nopember Surabaya <i>Siera Rozanah, Ervina Ahyudanari</i>
4	09.45-10.00	CE-08	DAB as an Effective Dispute Resolution in Construction Industry <i>Purnomo</i>
5	10.00-10.15	CE-12	Stabilization of Marine Dredged Sediment With Hydraulic Binders and Silica Fume <i>Ernesto Silitonga</i>
6	10.15-10.30	EE-02	GUI Applications on Ground Segment Research Rockets <i>Imam Sampurno Nugroho, Yahan Nuryad, Nanniek Andiani, Yohannes Dewanto</i>
7	10.30-10.45	EE-03	Document Subjectivity and Target Detection in Opinion Mining Using HMM Pos-Tagger <i>Amir Hamzah, Naniek Widyastuti</i>

CERTIFICATE



Presented to:

Lina Gozali, S.T., M.M.

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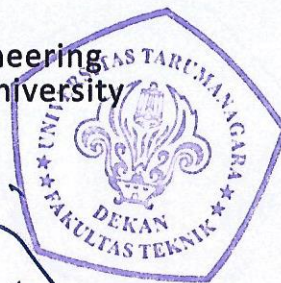
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RESEARCH COMPARISON AMONG BUSINESS INCUBATOR RESEARCH SAMPLE AND ANALYSIS IN THE WORLD

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Abstract

The key problem for researchers establishing metrics is agreeing on the criteria by which incubators should be evaluated. There are no satisfactory benchmarking comparators for evaluating incubators. The number of metrics by which they believed incubators should be evaluated internationally. A conclusion that can be drawn from this foregoing discussion is that there is a lack of standardization of evaluation approaches in terms of measures and methodology. The majority of incubators and their tenants, and incubator programs as their level of analysis. The number of sample for this research is limited because of small number Business Incubator in Indonesia

Keywords: Sample, Response Rate, Instrument, Analysis

INTRODUCTION

In many developed countries, many business incubators take part to help starts-up to develop their own business, especially the baby born business cannot compete with the giant industries that have been the old business player. It is widely accepted that the first incubator was created by Joseph Mancuso in Batavia, New York, in 1957 on a former Massey-Ferguson facility [10]. Such as in 1959, United States Government wanted to develop small and medium enterprises, create new jobs, pull economy out of depression by subsidizing academics and individuals to integrate existing resources to supply what SMEs needed at the beginning [24].

A business incubator (BI) is an organization that provides physical space and support programs for entrepreneurs or early stage start ups to deal with difficulties in the initial stage [13,16,17]. Advantages of Business Incubation in general instead of starting from scratch, SMEs and start-ups benefit from the business incubators' knowledge and networking that help young companies to succeed more quickly. In summary the business incubator's client can expect faster sales, smarter growth, fewer mistakes, less costs, and overcome market failures. Young business face specific risks; they lack information and business skills despite good business ideas, market orientation, marketing skills, and knowledge on accounting and book keeping. The incubator approach wants to help the entrepreneur to overcome these risks and to support the realization of promising business ideas through specific services

A Business Incubator is as we defined earlier setup 'to reduce the chances of failure in early stage companies and result in the financial viability and growth of firms that it supports'. Therefore incubators in India are setup to create sustainable and strong entrepreneur support infrastructure to enable young technology inventors and entrepreneurs to find the necessary support and access to resources to build successful start-ups. The heart of an incubator therefore, is the start-

The success of business incubators and technology parks in university settings is often determined by how well technology is transferred from the labs to their startup firms.

University technology transfer offices (UTTOs) function as “technology intermediaries” in fulfilling this role. Yet, entrepreneurship theory and research on the role of the UTTO in business incubation and new venture formation is sparse. To move the research along, we use grounded theory to build a framework to address two questions: (a) Which UTTOs’ structures and licensing strategies are most conducive to new venture formation; and (b) how are the various UTTOs’ structures and licensing strategies correlated with each other. Our findings reveal a complex set of relationships between UTTO structure and strategies, new venture formation, and business incubation [12].

Universities play an important role in motivating young graduates to become technology entrepreneur. The increasing number of graduate entrepreneurs will reduce the unemployment rate and even will increase the number of field work. Many developing countries have experimented with a variety of programs and schemes supporting small and medium enterprises, often with assistance from multilateral and bilateral organizations. Business incubation programs or initiatives have arisen especially over the last decade, with varying degrees of success [11]. Business incubator is an organization that systemize the process of creating successful new enterprise by providing them with a comprehensive and integrated range of services. Both in developed and developing countries, governments have been playing a key role in defining policies, programs and instruments which support the development of micro, small and medium enterprises.

The need to build a Public University Business Incubator is the startup companies cannot compete or survive with the Giant Industries. The second reason is many of them failed and cannot built their company sustainability.

LITERATURE STUDY

Business incubators facilitate the growth of small, entrepreneurial business with affordable space and shared support and business development services, such as financing, marketing and management. Business incubators can play a nurturing role in helping young businesses survive and grow during the start-up period when they are most financially venerable.

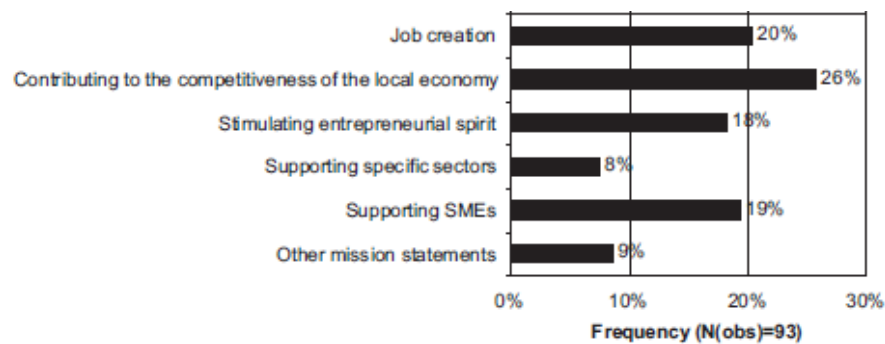


Figure 1. Business Incubator Mission [2]

The National Business Incubation Association of the United States defines business incubation as ‘a business support process that accelerates the successful development of start-up and fledging companies by providing entrepreneurs with an array of targeted resources and services’ [14]. A business incubator is an organization that devotes itself to nurturing entrepreneurial companies by offering them various resources and services from physical space, capital and investment, administrative services, to networking connection (Promitheas Business Innovation Centre, 2005). Business Incubation is especially important to fostering young firm through the most vulnerable startup phase.

According to the National Business Incubators Association [14], “Business incubation catalyzes the process of starting and growing companies, providing entrepreneurs with the expertise, networks and tools they need to make their ventures successful. Incubation programs diversify economies, commercialize technologies, create jobs and build wealth”.

Incubators exactly trying to achieve some objectives such as:

- i. Creation of business/employment
- ii. Commercialization of Intellectual Property
- iii. Technology Transfer
- iv. Inward Investment.

Incubators are generally characterized by some relevant features, which generally include:

- i. A managed work space providing shared facilities, advisory, training and financial services, and a nurturing environment for tenant companies;
- ii. A small management team with core competencies;
- iii. Selection of start-up companies entering the incubator, 20 to 25 in the average, to be graduated generally after 3 years.
- iv. Incubator models may vary according to:
- v. Their mandate (for-profit or not-for-profit)
- vi. The type of sponsorship they have (public – private – mixed)

Incubators typically offer their small business tenants a wide range of shared services; as well as access to financial and professional assistance. The mix of services varies among incubators. An example of incubator service may include:

- i. Co-location of entrepreneurs to ensure the cost-effective delivery of services, management assistance, ongoing tenant networking.
- ii. Shared services and facilities such as: administrative and secretarial services; receptionist/ answering services; conference rooms, computer rooms; photocopying; word processing; A/V equipment; telecommunications equipment and services; warehousing, shipping and receiving.
- iii. Management assistance, video libraries, and on-site access to consultants.
- iv. Group purchasing power for products and services such as health, insurance, furniture, supplies, etc.
- v. Professional services such as accounting and legal resources
- vi. Relationship with financial institutions and venture capital funds
- vii. Access to government and economic development resources and funding sources
- viii. Technology transfer and access to university resources
- ix. Foreign trade assistance
- x. New business opportunities through co-op ventures.

Incubator facilities, technology or innovation (ITI) centers are quite a new business and carry much hope and are put in place to follow a multitude of aims. In general management and sponsors of these centers claim to have at least one or more of the following objectives [19]:

- i. To promote or increase regional development
- ii. To help to contribute to structural change of the local or regional economy
- iii. To increase the rate of start-up companies with above average innovation potential; and
- iv. To contribute to general labor market goals by creating new jobs.

In Germany, technology and incubator centers serve to define technology policy and the responsibility for it at the regional level. It is one of the most important reasons for the boom of technology and incubators centers in Germany [19].

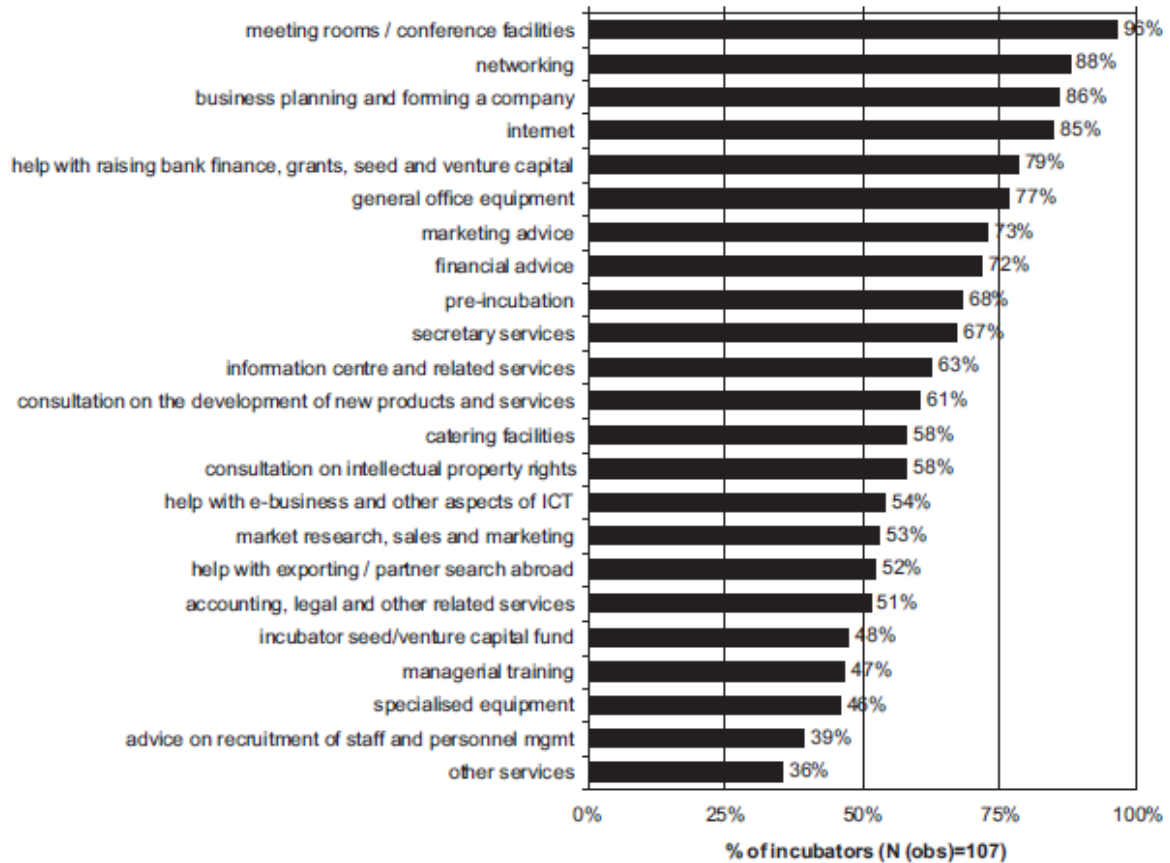


Figure 2. Services Offered to Tenants [1]

The objective of International Business Incubator (IBI) was introduced in China in 1987 as a providing a good environment for innovation, for small and medium-sized foreign technology companies and returned scholars.

RESEARCH COMPARISON AMONG BUSINESS INCUBATOR RESEARCH SAMPLE AND ANALYSIS IN THE WORLD

The key problem for researchers establishing metric is agreeing on the criteria by which incubators should be evaluated. [6,15,21] concur there are no satisfactory benchmarking comparators for evaluating incubators. In addressing this, Lalkaka and Shaffer [9] gave a number of metric by which they believe incubators should be evaluate internationally. In a different approach, National Business Incubation Association [14] identified that most important measures in evaluating performance as; the number of jobs created, clients served and companies graduated. A conclusion that can be drawn from the foregoing discussion is that there is a lack of standardization of evaluation approaches in terms of measures and technology [22]. The majority of incubator studies have focused on, incubator, incubator manager, incubator and their tenants, and incubator program as their level of analysis (see table 1).

Table 1. Unit of Analysis Employed by Different Authors

Year	Author	Unit of analysis	Sample	Response Rate	Instrument	Analysis
1985	David N. Allen [3]	Incubators and their tenants	40 incubator managers and 1050 tenants in these incubator facilities	850 tenants of which 30% was obtained for this study	Surveys	Mean, Median
1985	David N. Allen and Syedur Rahman [4]	Incubators and their tenants	12 incubator managers and 126 tenant firms	44% (56 tenant)	Surveys	Mean, Median and average
August (1987)	Raymond W Smilor [16]	Incubator Managers and directors	117 incubators	43% (50 incubators)	Mail Surveys	On site review, case study analysis, in-depth interviews, with incubator managers and directors.
November (1988)	Hugh Sherman and David S. Chappel [15]	Incubator Programs	50 incubator programs, 310 tenant firms	40% (126 completed surveys)	Survey	Average
Winter (1990)	David N. Allen and Richard McClusky [5]	Incubator Manager		70.5% (127 incubator manager)	Mail Survey	Regression Analysis
June (2000)	Morten T. Hansen, Nitin Nohria, and Jeffrey A. Berger [8]	Incubator stakeholders	356 for profit incubator worldwide	69% (169 completed surveys)	Telephone Interviews	Factor Analysis
February (2001)	Neal Young [26]	Incubator Manager	28 Business incubators	100% (28)	Telephone survey	Mean, Median
2004	Sameer Verma [22]	Incubator Manager and tenant company	31 incubator from with 3167 tenant	55% (31 incubator from 56 incubators)	Questionnaire	Percentage , mean, Correlation analysis
2006	Pam Voisey and Lynne Gornall, Paul Jones, Brychan Thomas [23]	University staff, enterprise, incubating enterprises	30 enterprises, 32 respondent		Questionnaire	Mean, Median
2007	Muhammad Abduh, Clare D' Souza, Ali Quazi, Henry T. Burley [1]	Incubators manager	24 incubators from 38 incubators	63%	Questionnaire	Mean

FUTURE BUSINESS INCUBATOR RESEARCH IN INDONESIA

The sample used for future study consisted of incubator managers in Indonesia Public University, involved in the day to day operations of the incubator and graduated tenant company. The sample was so proposed, as the respondents would have the necessary insights and experiences of managing incubators and in managing the relations within the incubator with tenant firms.

Recent research by Association Business Incubator in Indonesia (AIBI), suggest that the number of business incubators across Indonesia for Private, Public University and independent Business Incubator is over 70 incubators, consist of 30 Public Universities, 15 Vocational Academic Programs and 15 for Private Universities, and the rest is independent party. The sample targeted for this research is appointed for the Public University for about 20 Public Universities [5].

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