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Presentation by

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Contents

- Manufacturing Industries in Brunei
- Curriculum Required
- Current Directions

Manufacturing Industries in Brunei

- Oil and Gas and related
 - Oil country tubular goods (OGTC) supply and threading plant
- Petrochemicals and Chemicals
 - Hengyi Industries (BTX and transportation fuels)
 - Brunei Fertiliser Industries (Urea and Ammonia)
- Halal Industry
 - Bio-food and Food
 - Pharmaceutical-related research (MCBiotech and Simpur Pharma)
- Cottage Industries and Handicraft Centre

Table 4.2 : Key Statistics by Business Size and Type of Economic Activity, 2010, Brunei Darussalam

Pembuatan	Jumlah <i>Total</i>	Kecil <i>Small</i>	Sederhana <i>Medium</i>	Besar <i>Large</i>	Manufacturing
<i>Bilangan</i>			<i>Number</i>		
Perusahaan	695	509	177	9	<i>Enterprises</i>
Jumlah Pekerja	8,187	2,096	4,185	1,906	<i>Total Employment</i>
Tempatan	2,782	509	1,149	1,124	<i>Local</i>
Asing	5,405	1,587	3,036	782	<i>Foreign</i>
<i>Nilai (BND Ribu)</i>			<i>Value (BND Thousand)</i>		
Bayaran Pekerja	132,727.8	18,527.0	43,516.6	70,684.2	<i>Compensation of Employees</i>
Tempatan	81,601.6	7,779.2	16,581.4	57,241.1	<i>Local</i>
Asing	51,126.2	10,747.8	26,935.2	13,443.1	<i>Foreign</i>
Pendapatan Operasi	6,500,215.3	83,248.0	324,110.8	6,092,856.4	<i>Operating Revenue</i>
Perbelanjaan Operasi	3,714,980.7	50,084.0	224,438.6	3,440,458.1	<i>Operating Expenditure</i>
Output Kasar	6,467,273.5	60,096.2	310,309.5	6,096,867.8	<i>Gross Output</i>
Penggunaan Perantaraan	3,675,324.7	25,776.1	202,416.1	3,447,132.5	<i>Intermediate Consumption</i>
Nilai Tambahan Kasar	2,791,948.8	34,320.0	107,893.5	2,649,735.3	<i>Gross Value Added</i>

Sumber: Laporan Penuh Banci Ekonomi bagi Perusahaan dan Perniagaan 2011

Source: Full Report of The 2011 Economic Census for Enterprises and Businesses

Manufacturing industry data

- BDSIC 2011 (Definition of manufacturing industries)

Such as:

- Food products and beverages
 - Textiles, leather and related products
 - Wood and products of wood; paper and paper products
 - Refined petroleum products
 - Chemicals and chemical products
-
- New data for 2015-16 will be released in Q3 2016

Higher Education System in Brunei

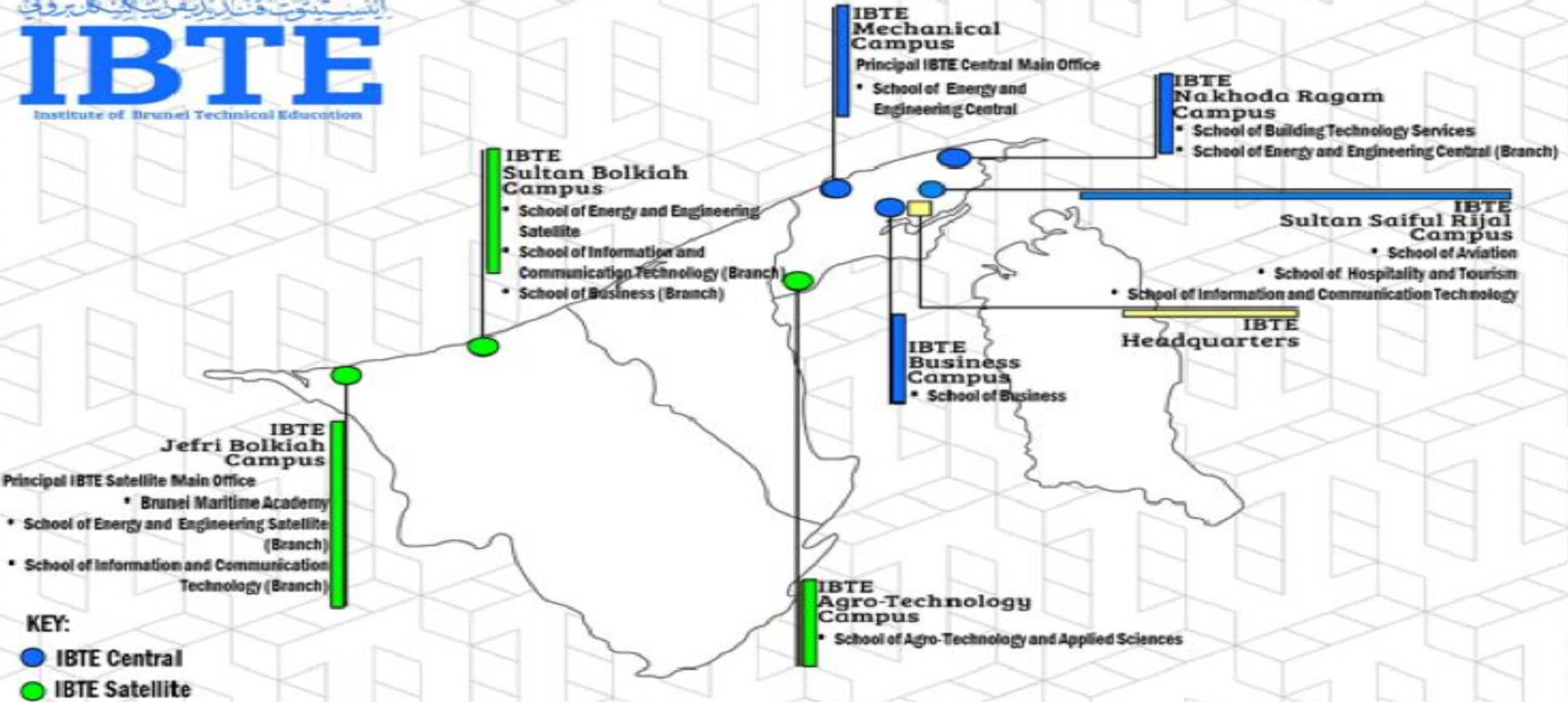
- Universities (4 in total; 2 engineering-related)
 - Universiti Brunei Darussalam (UBD)
 - Universiti Teknologi Brunei (UTB)
 - Universiti Islam Sultan Sharif Ali (UNISSA)
 - Kolej Universiti Perguruan Ugama Seri Begawan (KUPUSB)
- Politeknik Brunei – Higher National Diploma (HND) courses
- IBTE (Institute of Brunei Technical Education)

Recent transformation under one umbrella

- Effective and efficient management system
- Consistent and effective teaching & learning practices across the school

Recent Transformation of IBTE

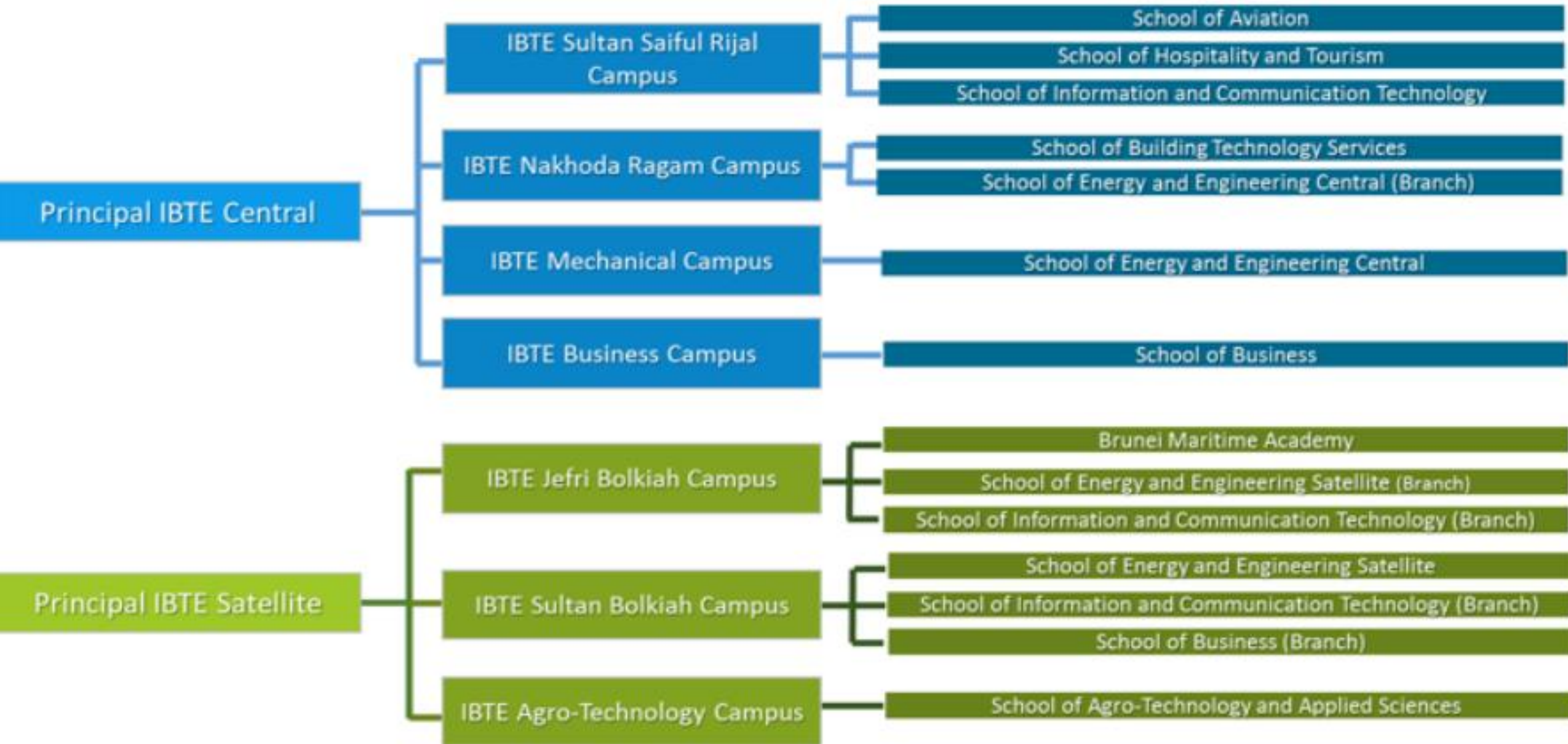
IBTE CAMPUSES AND SCHOOL LOCATION



New IBTE Designations

PREVIOUS DESIGNATION OF TECHNICAL & VOCATIONAL INSTITUTIONS	NEW DESIGNATION OF IBTE CAMPUSES	
	Malay	English
Maktab Teknik Sultan Saiful Rijal	IBTE Kampus Sultan Saiful Rijal	IBTE Sultan Saiful Rijal Campus
Maktab Kejuruteraan Jefri Bolkiah	IBTE Kampus Jefri Bolkiah	IBTE Jefri Bolkiah Campus
Sekolah Vokasional Nakhoda Ragam	IBTE Kampus Nakhoda Ragam	IBTE Nakhoda Ragam Campus
Sekolah Vokasional Sultan Bolkiah	IBTE Kampus Sultan Bolkiah	IBTE Sultan Bolkiah Campus
Sekolah Vokasional Wasan	IBTE Kampus Agro-Teknologi	IBTE Agro-Technology Campus
Sekolah Perdagangan	IBTE Kampus Bisnes	IBTE Business Campus
Pusat Latihan Mekanik	IBTE Kampus Mekanikal	IBTE Mechanical Campus

IBTE Campuses and Schools



IBTE links with industries

- Mainly cater for the oil and gas industries through the EICF (Energy Industry Competency Framework) programme
- Jobs such as:
 - Rigging
 - Scaffolding
 - Welding
 - Marker Fitting

UTB links with industries

- Civil Engineering
- Petroleum and Chemical Engineering (2 years UTB + 2 years UNSW)
- Electrical and Electronics Engineering
- Mechanical Engineering

Services

- Materials Testing Centre
 - Services to construction, building and engineering organisations

UBD **GenNEXT** curriculum relevance for industries

- Introduction of the Discovery Year – compulsory for graduation!

In UBD, under Faculty of Integrated Technologies (FIT):

- Chemical and Process Engineering
- Systems Engineering
 - Energy Systems Engineering
 - Info-Communications Systems Engineering
 - Manufacturing Systems Engineering

Chemical and Process Engineering

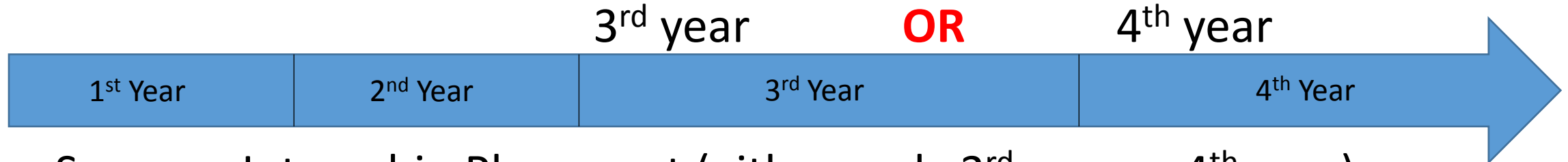
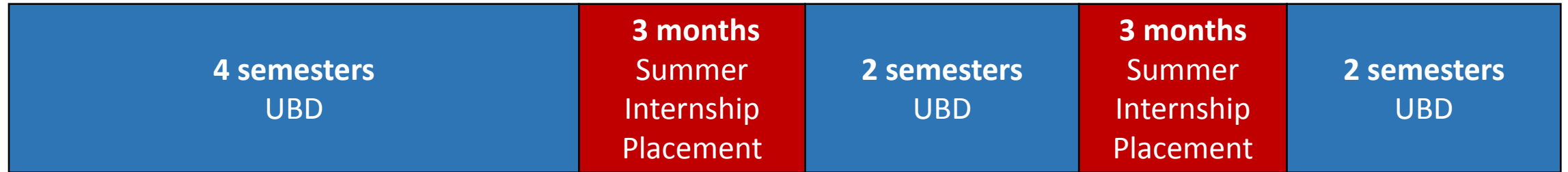
- 4 years Bachelor of Engineering programme



- Hengyi Industries – Petrochemical Refinery (Manufacturing)

Systems Engineering

- 4 years Bachelor of Engineering programme



- Summer Internship Placement (either early 3rd year or 4th year)
- Innovation and Entrepreneurship I and II modules
- 4th year (final 2 semesters) – Stakeholders (advisory board) give inputs on the modules required in industries

Current Direction

- Ministry of Industry and Primary Resources (MIPR) to Ministry of Primary Resources and Tourism (MPRT)
- ‘Industry’ absorbed to Ministry of Energy to become Energy and Industry Department, Prime Ministers Office (EIDPMO)
- Developments have created:
 - DARE (Darussalam Enterprise) – Nurture and support local enterprises from start-up to growth. Link: <http://www.dare.gov.bn/Theme/Home.aspx>

Darussalam Enterprise (DARe)

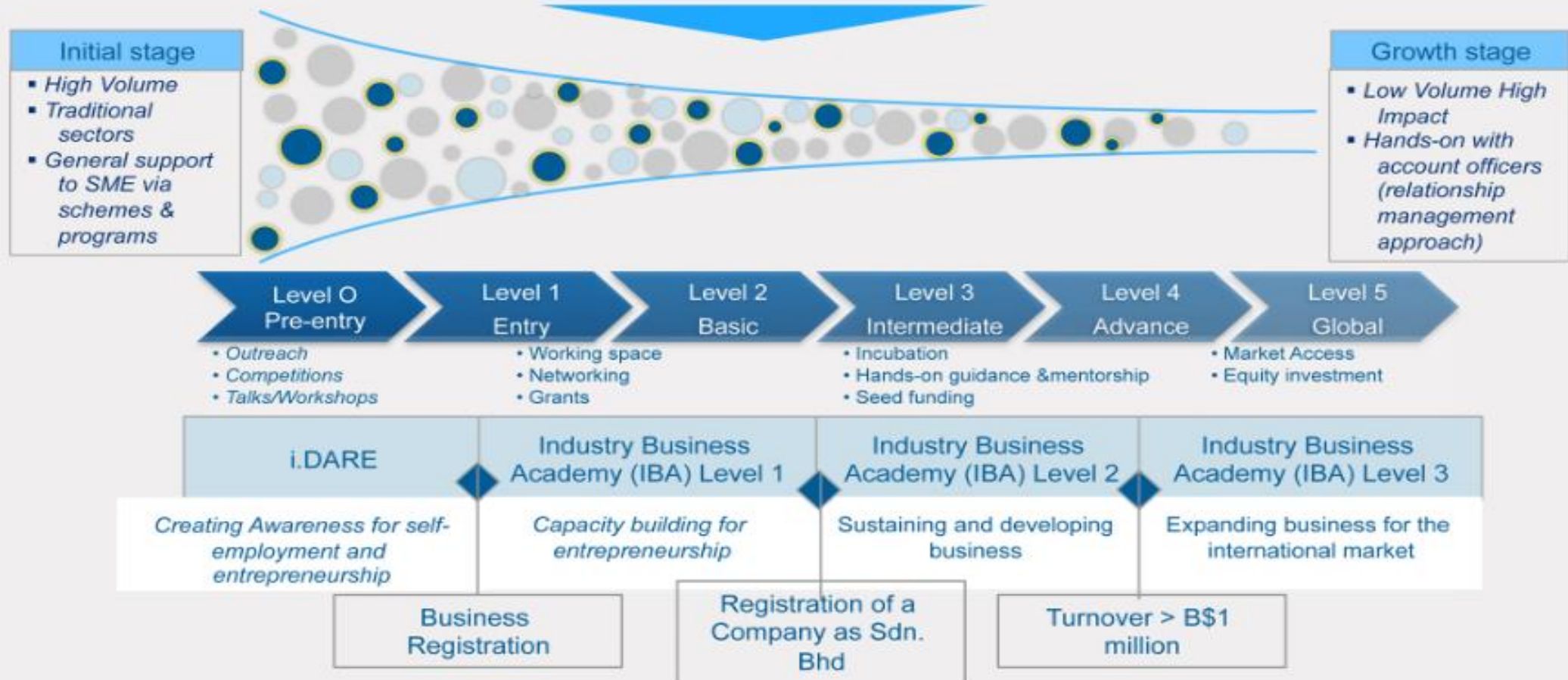
DARe will develop local enterprises by assisting in capacity building; facilitating access to funding, investment and access to domestic and international markets; running the Business Support Centre; and also providing land sites and facilities that were formerly provided by the Brunei Industrial Development Authority (BINA) and the Brunei Economic Development Board (BEDB).

- 1 Promoting Growth of Brunei Enterprises:**
Providing an environment that nurtures and grows enterprises
- 2 Focused Development of Specific Sectors:**
Driving economic growth aligned with Wawasan Brunei 2035
- 3 Access to Funding for Enterprises:**
Facilitate and grant access to funding and investments
- 4 Facilitate Market Access:**
Facilitation regional and global market access for local SMEs services and products
- 5 Capacity Development & Advisory Services:**
Providing business advice and tailored training programs
- 6 Industrial Space and Facilities:**
Providing high quality industrial space and facilities
- 7 Operate the Business Support Centre:**
Providing a centre for business-related applications and services

Enterprise Development Programme

Programs and Governance Structure

- The enterprises will be channelled according to the stage of development (Level 0- 5)
- The governance will be based on a common steering committee consisting of Subject Matter Experts and regular review for more consistent methods of tracking outcomes and success as well as allowing companies to progress via appropriate programs as it matures



SME MATURITY INDICATOR:

All enterprises who seek DARE assistance will first be assessed to determine their level of maturity and mapped against a pre-defined matrix. The maturity level of the enterprise determines the type of assistance that the respective enterprise will receive. For example; Startups are equivalent to Level 0 to 2 and will be eligible for such assistance; outreach programs, competitions, talks, workshops, working space, networking and grants. The maturity level of an enterprise also determines courses suited to their development which includes; i.DARE, Industry Business Academy (IBA) Level 1, Industry Business Academy (IBA) Level 2 and Industry Business Academy (IBA) Level 3.

All enterprises under DARE will be channeled into a funnel which will initially start with “High Volume” type of activities and schemes. By the end of the funnel, DARE will have more specialised and focused schemes tailored to take local enterprises globally and thus will bring significant contribution to the GDP of Brunei.

- Data from this indicator will help us to obtain information for the SME's in manufacturing industry
- Overall Brunei's manufacturing industry data can be obtained from the Economic census report from 2011 (and soon 2015)

References

- www.ubd.edu.bn
- www.utb.edu.bn
- www.pb.edu.bn
- <https://ibte.edu.bn>
- <http://www.dare.gov.bn/Theme/Home.aspx>