25TH ASEAN VALUERS CONGRESS

Theme: Scaling New Heights In Real Estate And Business Valuation
Riverside Majestic Hotel, Kuching, Sarawak, Malaysia
18 – 20 September 2023

PLENARY SESSION 1 :
INTANGIBLE ASSETS VALUATION

NAVIGATING, EMERGING, TECHNOLOGY-BASED INTANGIBLE ASSETS

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DEFINITION OF INTANGIBLE ASSETS

An intangible asset is

- a non-monetary asset that manifests itself by its economic properties. It does not have physical substance but grants rights and/or economic benefits to its owner *(International Valuation Standards 210).*

- an identifiable non-monetary asset without physical substance *(International Accounting Standards 38.8)*

There are many categories of intangible assets, but our

is about the
EMERGING, TECHNOLOGY- BASED INTANGIBLE ASSETS.

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CATEGORIES OF INTANGIBLE ASSETS

MARKETING-RELATED

- ✓ Trademarks
- ✓ Brand names
- ✓ Trade names
- ✓ Domain names
- ✓ Non-competition agreements

ARTISTIC-RELATED

- ✓ Literary works
- ✓ Musical works
- ✓ Pictures
- ✓ Photographs
- ✓ Sculptures
- ✓ Copyrights
- ✓ Royalty agreements

CONTRACT-BASED

- ✓ Licensing agreements
- ✓ Franchise agreements
- ✓ Leases construction permits
- ✓ Broadcast rights
- ✓ Service contracts

CUSTOMER-RELATED

- ✓ Customer lists
- ✓ Customer contracts
- ✓ Customer relationships
- ✓ Order backlogs
- ✓ Non-contractual customer relationships

TECHNOLOGY-BASED (TRADITIONAL)

- ✓ Patented technology
- ✓ Unpatented technology
- ✓ Computer software
- ✓ Databases
- ✓ Trade secrets

THE TECHNOLOGY-BASED INTANGIBLES UNIVERSE

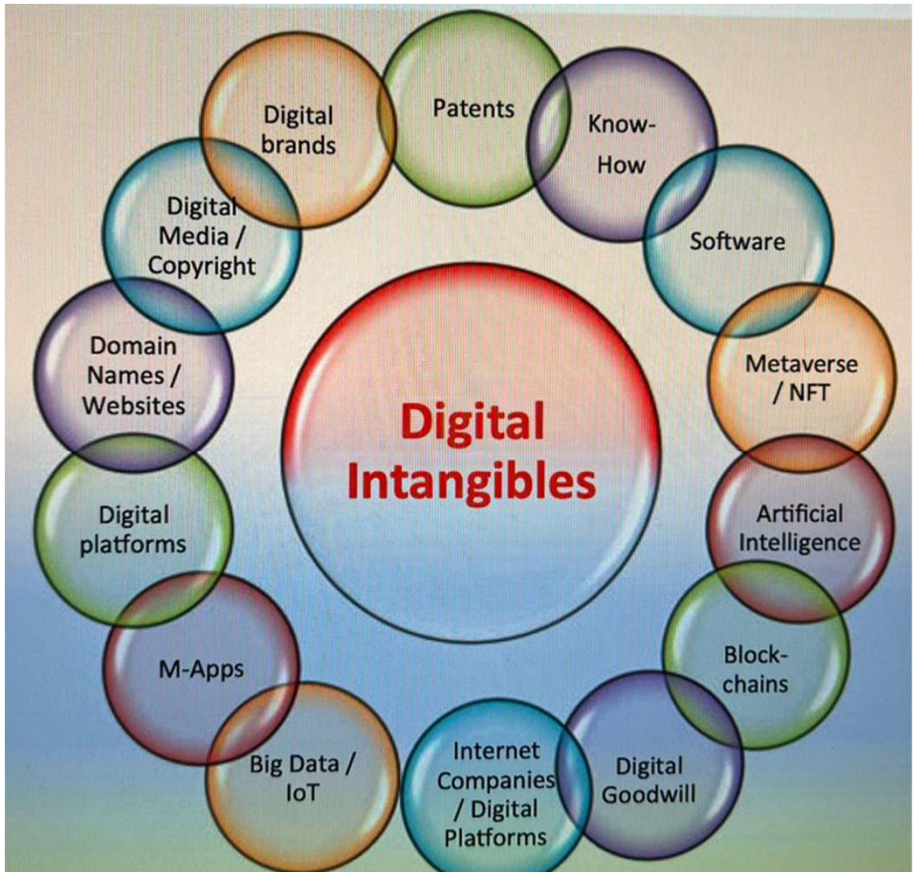
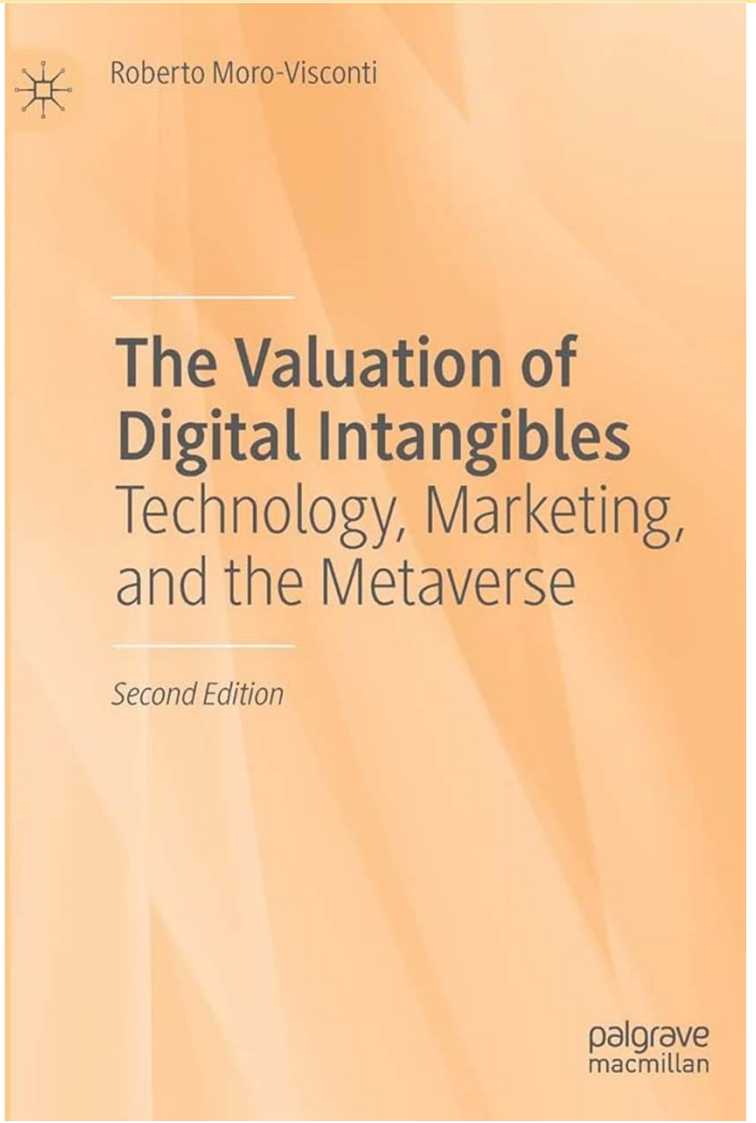


Image source: The Valuation of Digital Intangibles by Roberto Moro-Visconti 2022

Digital intangibles are taken be the same as technology-based intangibles



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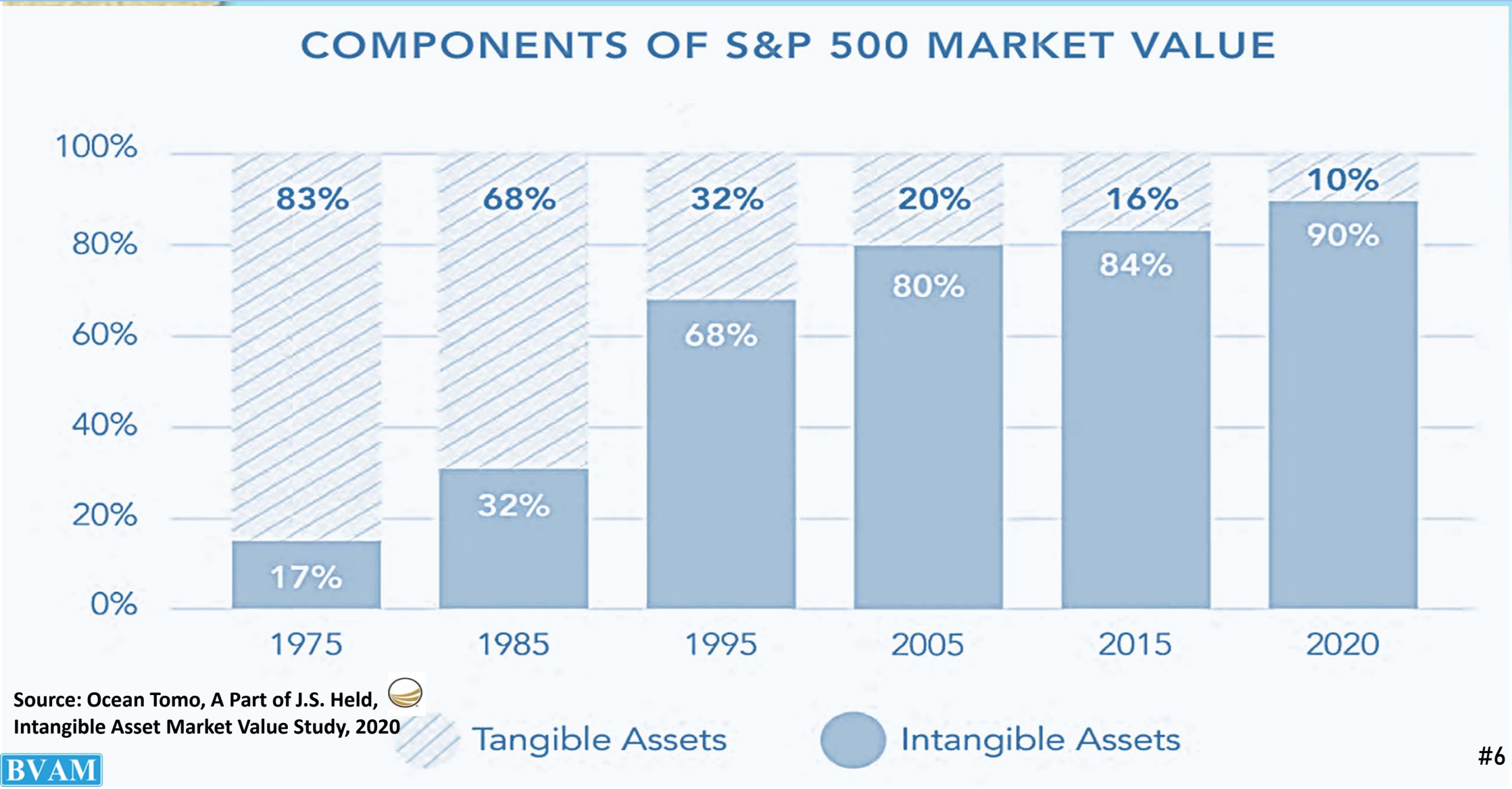
INCREASING IMPORTANCE OF INTANGIBLE ASSETS



Source: Ocean Tomo, A Part of J.S. Held, Intangible Asset Market Value Study, 2020

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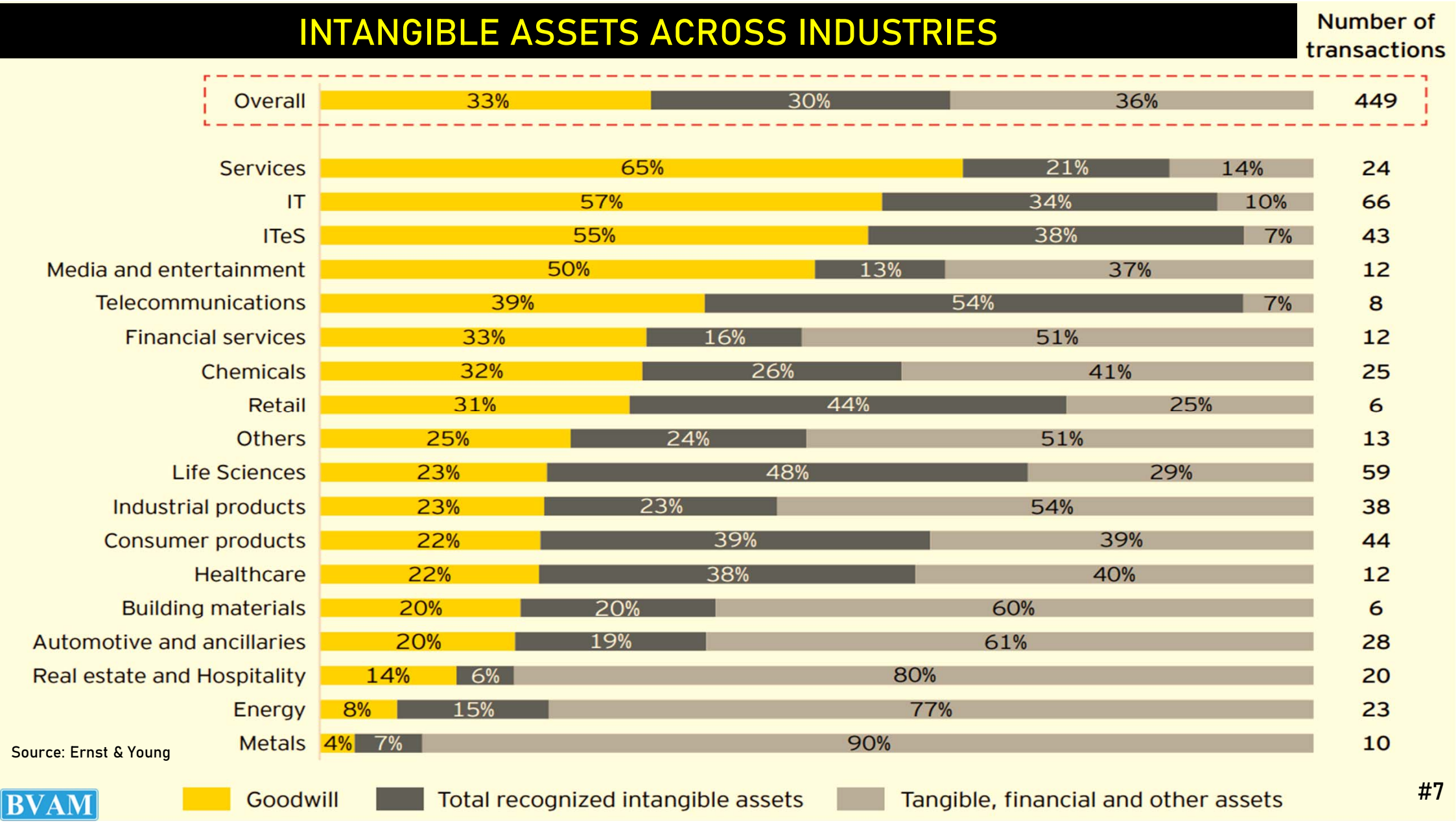
INTANGIBLE ASSETS ACROSS INDUSTRIES



Source: Ernst & Young

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VALUATION APPROACHES

Market Approach

Value estimate
=
Market prices or based on multiples or prices from market transactions involving the sale of comparable assets

Income Approach

Value estimate
=
Present value of earnings attributable to the asset or costs avoided as a result of owning the asset

Cost Approach

Value estimate
=
Reproduction or Replacement Cost – adjusted for physical deterioration and obsolescence

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COMMONLY USED VALUATION METHODS

1. THE INCOME APPROACH

This approach is based on the assumption that the value of an asset is the present value of its future cash flows.

Some of the methods for the Income Approach:-

a. Relief from Royalty Method (RFR)

b. Multi-Period Excess Earnings Method (MEEM)

c. Incremental Cash Flow Method

d. Discounted Cash Flow Method (DCF)

e. The 25% Rule of Thumb

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SIMPLE EXAMPLE OF BRAND NAME VALUATION USING RELIEF FROM ROYALTY METHOD

RM Million		1	2	3	4	5
Revenue attributable to Brand		1,250	1,313	1,378	1,447	1,519
Royalty Rate	5%					
Pre-tax Royalty Savings		63	66	69	72	76
Corporate Tax	24%	(15)	(16)	(17)	(17)	(18)
After-tax Royalty Savings		48	50	52	55	58
Present Value (Mid Year Convention)	13%	45	42	39	36	33
Sum of Present Value		194				

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SIMPLE EXAMPLE OF CUSTOMER RELATIONSHIP VALUATION USING MEEM

RM Million		1	2	3	4	5
Revenue from Customer Relationship		1,250	1,313	1,378	1,447	1,519
Customer Retention Rate		85%	80%	75%	70%	65%
Revenue after attrition		1,063	1,050	1,034	1,013	988
Earnings before Interest, Tax, Depreciation and Amortisation (EBITDA) Margin		30%	30%	30%	30%	30%
EBITDA contribution of revenue		319	315	310	304	296
Contributory Asset Charges ("CAC"):						
Net Working Capital	1.0%	(11)	(11)	(10)	(10)	(10)
Fixed Assets	2.5%	(27)	(26)	(26)	(25)	(25)
Workforce	2.0%	(21)	(21)	(21)	(20)	(20)
Cash Flow After CAC		260	257	253	248	242
Corporate Tax	24%	(62)	(62)	(61)	(60)	(58)
Free Cash Flow		198	196	192	189	184
Present Value (Mid Year Convention)	13%	186	163	142	123	106
Sum of Present Value		720				

SIMPLE EXAMPLE OF VALUATION OF LEASING AGREEMENT USING INCREMENTAL CASH FLOW METHOD

RM Million		1	2	3	4	5
Total market rent payable (Based on market studies)		225	248	272	299	329
Total rent payable (Based on tenancy agreement)		150	165	182	200	220
Pre-tax difference in rent payable		75	83	91	100	110
Corporate Tax	24%	(18)	(20)	(22)	(24)	(26)
Free Cash Flow		57	63	69	76	83
Present Value (Mid Year Convention)	13%	54	52	51	49	48
Sum of Present Value		254				

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SIMPLE EXAMPLE OF LICENSING AGREEMENT VALUATION USING DCF

RM Million		1	2	3	4	5	
Revenue		1,000	1,050	1,103	1,158	1,216	
Cost of sales		320	336	353	370	389	
Gross Profit		680	714	750	787	827	
Operating Costs		(210)	(221)	(232)	(243)	(255)	
Research & Development		(20)	(21)	(22)	(23)	(24)	
Sales & Marketing		(80)	(84)	(88)	(93)	(97)	
General & Admin		(125)	(131)	(138)	(145)	(152)	
EBITDA		245	257	270	284	298	
Capex		(50)	(53)	(55)	(58)	(61)	
Working Capital		(30)	(32)	(33)	(35)	(36)	
Net Cash Flow		165	173	182	191	201	
Residual Value (Terminal Value)							1,000
Present Value (Mid term Convention)	20%	151	132	115	101	88	440
Sum of Present Value		1,027					

SIMPLE EXAMPLE OF PATENT VALUATION USING RULE-OF-THUMB

RM Million		1	2	3	4	5
Revenue		1,250	1,313	1,378	1,447	1,519
EBIT		313	328	345	362	380
Rule of Thumb	25%	78	82	86	90	95
Corporate Tax	24%	(19)	(20)	(21)	(22)	(23)
Net Cash Flow		59	62	65	69	72
Present Value (Mid Year Convention)	12%	56	53	49	46	43
Sum of Present Value		248				

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Time horizons for cash flows for valuing intangible is usually five years. But this is not something that is cast in stone. Longer time horizon can be incorporated if the cash flows can be determined with more certainty. Terminal values can also be included for the same reason.

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2. THE MARKET APPROACH

The Comparable Transaction Method

This is a valuation technique often used for intangible assets. It is most applicable when the subject is the type of intangible asset that sells in the marketplace as a separate intangible asset, such as:-

- credit card customer portfolios
- bank core depositors
- mortgage servicing rights; and
- mortgage and other loan portfolios.

3. THE COST APPROACH

Estimating the cost of replacing the asset, adjusted for physical deterioration and obsolescence.

a. Replacement Cost Method

This method estimates the current cost to replace the intangible asset with another of similar utility.

b. Reproduction Cost Method

This method estimates the cost to reproduce an exact replica of the intangible asset.

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SIMPLE EXAMPLE OF VALUATION OF WORKFORCE USING THE REPLACEMENT COST METHOD

Category	Recruiting Cost	Training Cost	Efficiency Cost	Total Per head	No of Employees	Total Workforce
Management	7,500	1,250	1,000	9,750	6	58,500
Sales	1,800	2,500	1,800	6,100	12	73,200
Marketing	1,800	2,500	1,800	6,100	3	18,300
Finance	1,800	2,500	1,800	6,100	3	18,300
Engineers	850	2,500	1,800	5,150	30	154,500
						322,800
Corporate Tax					24%	(77,472)
Assembled workforce fair value						245,328

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PROBABILISTIC AND REAL OPTIONS VALUATIONS

Probabilistic and real options valuations are often more applicable for technology-based intangible valuations. This is because they have uncertain and evolving future cash flows and potential for growth. Probabilistic valuation models incorporate various possible outcomes and their probabilities, allowing for a more comprehensive assessment of the value of the assets.

REAL OPTIONS VALUATIONS

Real options valuations, on the other hand, considers the flexibility and options inherent in technology-based intangibles, which can lead to additional value through the ability to adapt, expand or abandon projects based on changing market conditions or technological advancements.

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PROBABILISTIC VALUATION MODELS & REAL OPTION PRICING MODELS

- **Probabilistic Valuation Models**
  - Scenario Analysis
  - Decision Tree
  - Simulations

- **Real Option Pricing Models**
  - Binomial Option
  - Black-Scholes Model

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Case
Studies

CASE STUDY 1
VALUATION OF BUILDING MANAGEMENT SYSTEM (BMS)

A computer-based control system installed in buildings that controls and monitors the building's mechanical and electrical equipment such as:-

- ventilation
- lighting
- power systems
- fire systems; and
- security systems.

The BMS market continues to grow, driven by the increasing emphasis on energy efficiency, sustainability, and smart technology integration within modern building design and operations.

Commercialized through subscription services granted together with ongoing support services / sale of related hardware and installation/integration services.

Also commercialized through energy management contracts that share in the savings delivered to convince potential customers about the value-add of a BMS.

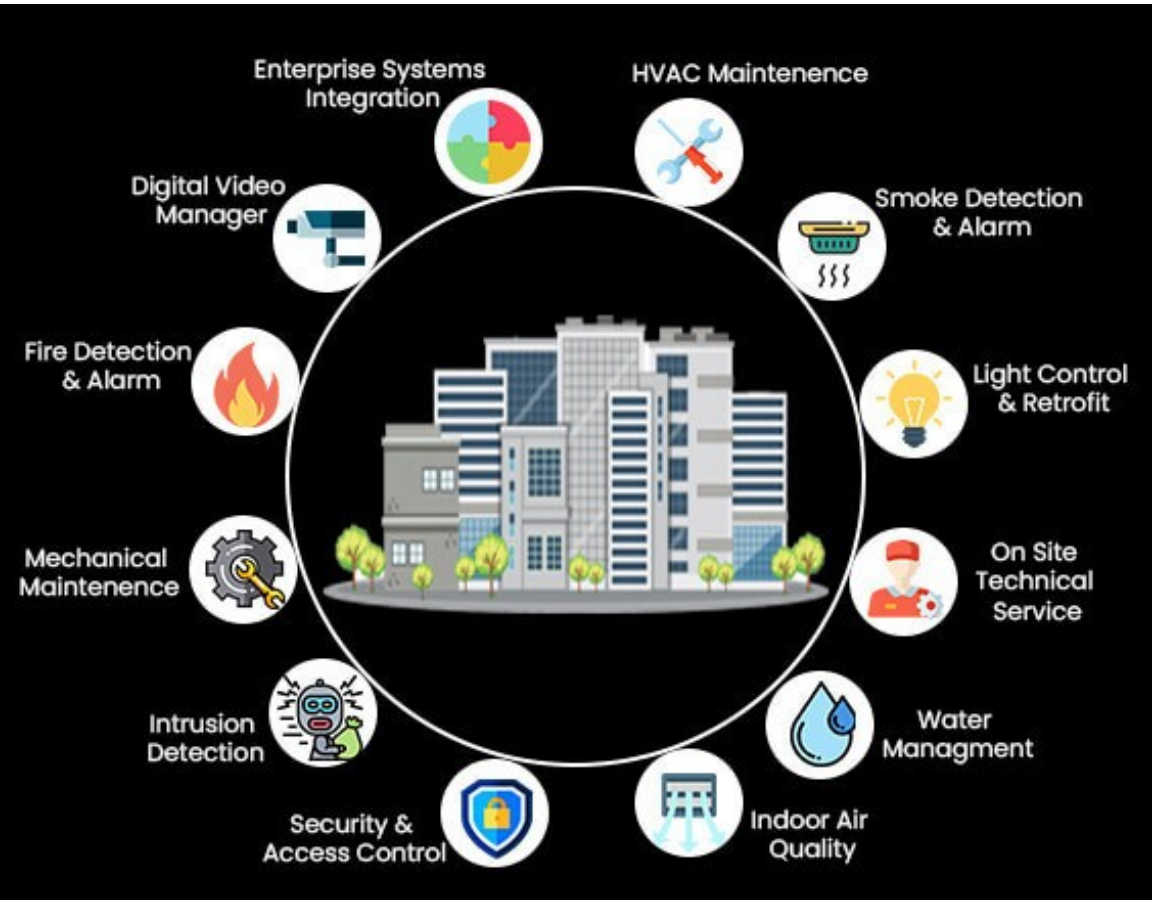

Image from www.psiborg.in

Building Management System (BMS)

A typical Cloud-based Building Management System (BMS) software and platform Architecture with Internet of Things (IoT)

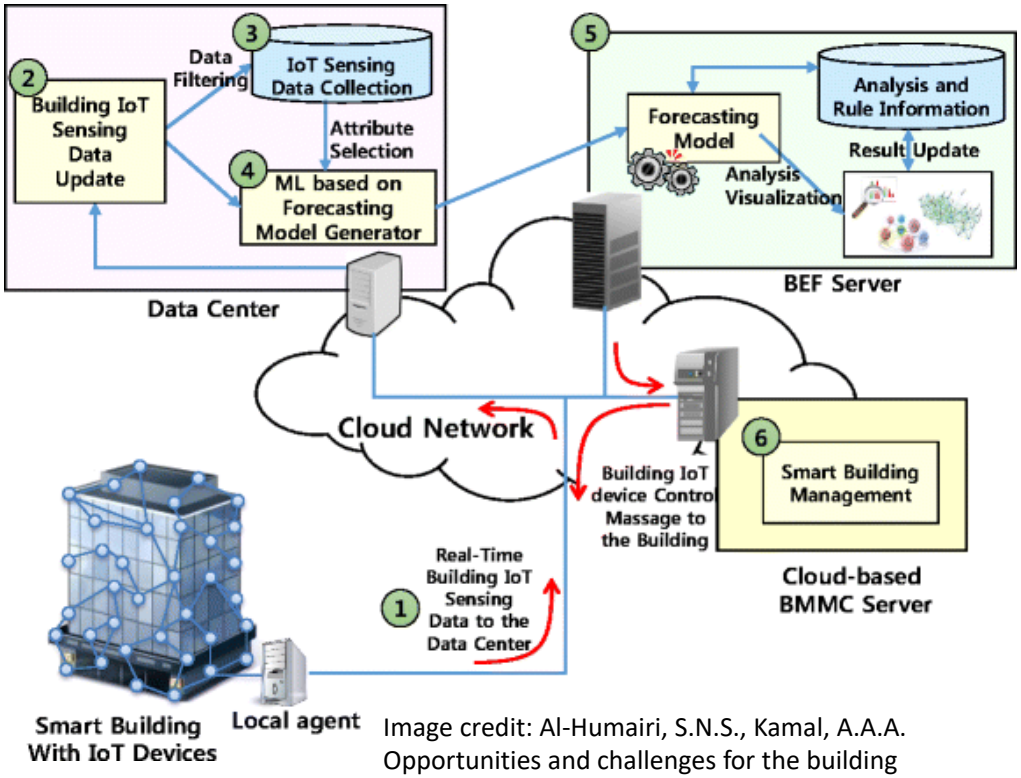

Image credit: Al-Humairi, S.N.S., Kamal, A.A.A. Opportunities and challenges for the building monitoring systems in the age-pandemic of COVID-19

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A sample calculation using the MEEM

Year		1	2	3	4	5
Revenue (RM '000)		945	990	1040	1090	1150
EBIT		151	135	120	100	90
Contributory asset charges						
Net working capital		5	4	4	3	3
Fixed assets		25	20	18	15	13
Tax	24%	36	32	29	24	22
Net cash flow		85	79	69	58	52
Discount period		0.5	1.5	2.5	3.5	4.5
Discount factor	15%	0.93	0.81	0.71	0.61	0.53
Present value	256	79	64	49	36	28

CASE STUDY 2
VALUATION OF A METAVERSE REAL ESTATE

The Metaverse is a digital environment that replicates real-world experiences.

With the rapid technological development real estate is being transacted in the Metaverse through various platforms.

One popular Metaverse platform is Decentraland which utilises blockchain technology for decentralised control and integrity. In Decentraland, people can meet, buy and sell items.

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- Decentraland, with its cartoon-based design, offers 90,000 plots of land measuring 16 meters by 16 meter.
- The price of these plots depends on factors such as size, proximity to hotspots, and accessibility to roads.

- The value of virtual real estate including platforms like Decentraland has evolved significantly over time.
- Initially when these platforms were relatively new, the prices for virtual lands were relatively low.
- However, as the Metaverse gained popularity, and more users joined these virtual worlds, the demand has increased.

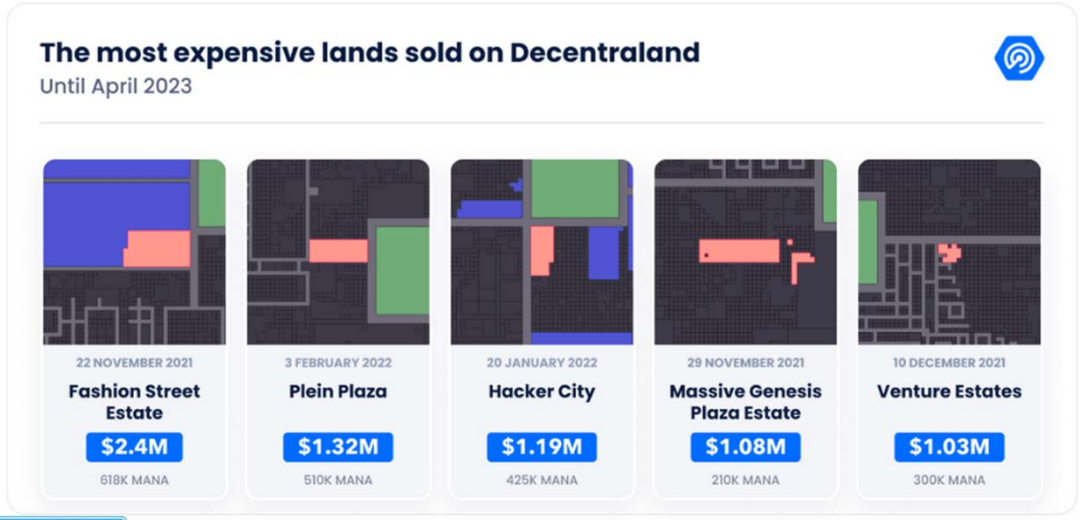
Why would someone want to buy a virtual real estate in the Metaverse?

1. Speculative Potential – Similar to cryptocurrencies like Bitcoin, the value of virtual real estate in the metaverse has increased over time. Buying virtual land now can yield future benefits and opportunities.

2. Advertising opportunities. Developers and brand seek to advertise their products or services in the metaverse. By owning virtual land, individuals can rent out space to advertisers, maximising traffic and exposure.

3. Brand expansion. Real-world brands can establish a presence in the metaverse by creating virtual versions of their products, such as handbags, to sell and promote themselves in the digital realm.

Map of Decentraland



Example of other real estate Metaverses

1. Somnium Space
2. The Sandbox
3. Cryptovoxels
4. Upland
5. High Fidelity

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Summary of a hypothetical valuation of metaverse real estate that uses the Comparison Method

Comparable Transaction		1	2	3
Sale price (RM)		37,300	29,200	33,350
Area (sqm)		184	149	165
Unadjusted price per sqm (RM)		203	196	202
Adjustments for dissimilarities				
Size/dimension		-5%	-5%	-5%
Location		0%	10%	-5%
Utility		-10%	-5%	-5%
Total adjustments		-15%	0%	-15%
Adjusted sale price per sqm (RM)		172	196	172
Weight		50%	30%	20%
Weighted equivalent	179	86	59	34
Area of subject metaverse real estate (sqm)	256			
Value of subject metaverse real estate (RM)	45,903			

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CASE STUDY 3 – VALUATION OF AN AI PLATFORM

- Many AI startups without revenue are raising funds, giving insight into their values.
- Mergers and acquisitions also provide valuation indications.
- Recent funding rounds for platforms like Synthesia, Adept AI, and OpenAI suggest multi-billion-dollar valuations.
- Valuation methods include using multiples from comparable transactions and income-based approaches as platforms generate revenue.

9 Best Free AI Platforms

Source: fotor.com

Latest acquisitions of AI-based businesses

Acquisition of MosaicML by Databricks for $1.3 billion

- MosaicML is a generative AI platform, allowing more companies to access LLM technology to build, own and secure generative AI models with their own data, at a much cheaper cost and faster rate, and without the worry of data privacy and IP concerns.

$12.5 billion purchase of Qualtrics by Silver Lake

- Qualtrics is a CXM (Customer Experience Management) platform that focuses on collecting, organizing, and understanding important data relative to customers and employees.

Thomas Bravo's $8 billion deal for Coupa Software

- Coupa is a leader in Business Spend Management, has developed a proprietary AI-based commodity classification engine that maps millions of its customers' transactions to a standard taxonomy1. The company also uses Artificial Intelligence (AI) and Machine Learning (ML) to classify transactional data, trained using anonymized data from across the Coupa community

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Summary of a hypothetical valuation of a startup AI platform using the Market method

Comparable Transaction		1	2	3
Sale price (RM)		1,500,000	2,000,000	4,000,000
Key metric		100	125	200
Price/ Key metric (RM)		15,000	16,000	20,000
Weight		20%	50%	30%
Enterprise value (RM)	17,000	3,000	8,000	6,000
Breakdown of enterprise value:				
Tangible assets	5,000			
Other intangible assets	500			
AI Platform	11,500			

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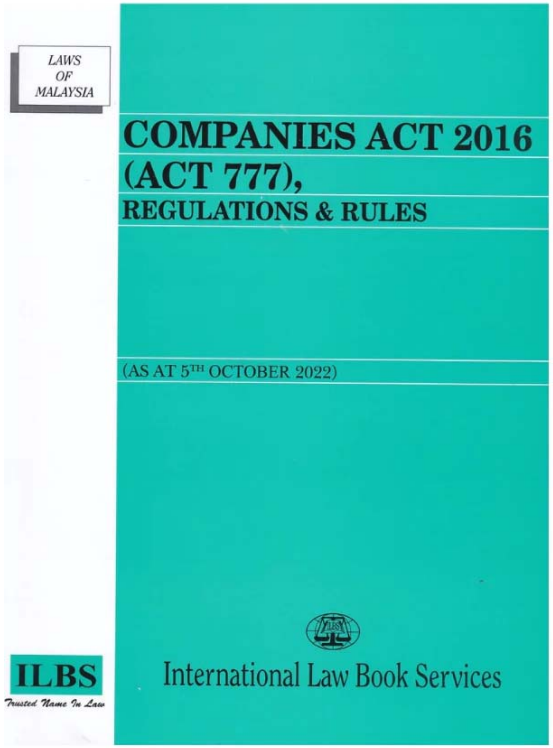
OVERVIEW OF THE EXISTING STANDARDS AND GUIDELINES

REGULATORY, FINANCIAL REPORTING AND ACCOUNTING CONSIDERATIONS FOR INTANGIBLE ASSET VALUATION IN MALAYSIA

Other regulatory considerations

Companies Act 2016 requires companies to maintain proper accounting records, including records of their intangible assets, and to prepare financial statements in accordance with approved accounting standards.

Overall, it is important for companies in Malaysia to comply with the relevant regulatory and accounting requirements when valuing their intangible assets to ensure transparency, accuracy, and consistency in financial reporting



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POTENTIAL DEVELOPMENTS AND CHANGES DUE TO INCREASING ADOPTION OF TECHNOLOGY-BASED INTANGIBLES

How can AI and technology be reported and accounted for in financial statements?

Currently, there are no standardised accounting practices for valuing intangible assets, which can lead to inconsistencies and inaccuracies in financial reporting. The lack of transparency in accounting practices can also make it difficult for investors to assess the true value of a company's assets.

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POTENTIAL DEVELOPMENTS AND CHANGES DUE TO INCREASING ADOPTION OF TECHNOLOGY-BASED INTANGIBLES

Financial reporting and regulatory frameworks need to:-

- Accurately reflect the value of these assets and ensure transparency in financial reporting.
- Adapt to reflect the changing nature of intangible assets
- Address the risks associated with technology-driven intangible assets, such as cybersecurity risks so that that companies adequately protect themselves and their investors from these risks.

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1. Intangible assets as an asset class has been growing steadily in the past several decades and the pace of its growth is now accelerating further with the explosive growth of the emerging sub-class of technology-based intangible assets.

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2.Malaysia, under its newly released New Industrial Master Plan 2030 (NIMP 2030) has declared under “Mission 2” (out of 4 “Missions”) of the Plan to “Tech Up for a Digitally Vibrant Nation”.

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3.The Accounting profession faces a challenge in recognising intangible assets and more so with the emerging technology-based intangibles more comprehensively onto the Balance Sheets of companies.

4. Banks and financial institutions in ASEAN must accelerate their efforts to recognise intangible assets as collateral so that the preponderant Small and Medium scale Enterprises (SME) can leverage their intangible assets and grow faster and contribute as well to more rapid economic growth.

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5. Concomitant and corollary to the above the Valuers in ASEAN must rise to the challenge of providing valuations, including valuations of technology- based intangible assets, with integrity, competence and independence.

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