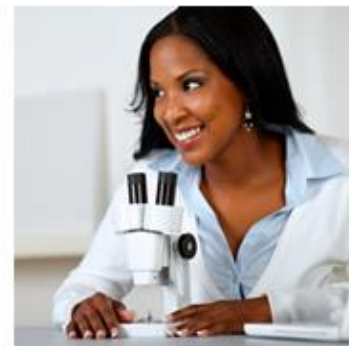


An Overview of STI in Africa

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We shall accumulate machinery and establish steel works, iron foundries and factories; we shall link the various states of our Continent with communications; we shall astound the world with our hydroelectric power; we shall drain marshes and swamps, clear infested areas, feed the undernourished, and rid our people of parasites and disease.

It is within the possibility of science and technology to make even the Sahara bloom into a vast field with verdant vegetation for agricultural and industrial developments”.

**President Kwame Nkrumah,
first speech at the foundation summit of the
Organization of African Unity,
Addis Ababa, 24 May 1963**



Status of *STI* in Africa

ST_i
in Africa today



**S&T,
I & E**
The Africa we want



Overview-Status of *STI in Africa*

Strengths

- African leadership recognize the critical role played by STI in socio-economic growth (eg STISA2024 etc.)
- Bilateral and multilateral cooperation on STI among AU Member States
- Increased ST output

Weaknesses

- Weak STI Research infrastructures in African countries
- Insufficient funding for STI
- Low awareness about IP and clear IP policy for publicly funded R&D
- Weak enabling environment for STI (Framework conditions)
- Innovation performance of most African countries not known



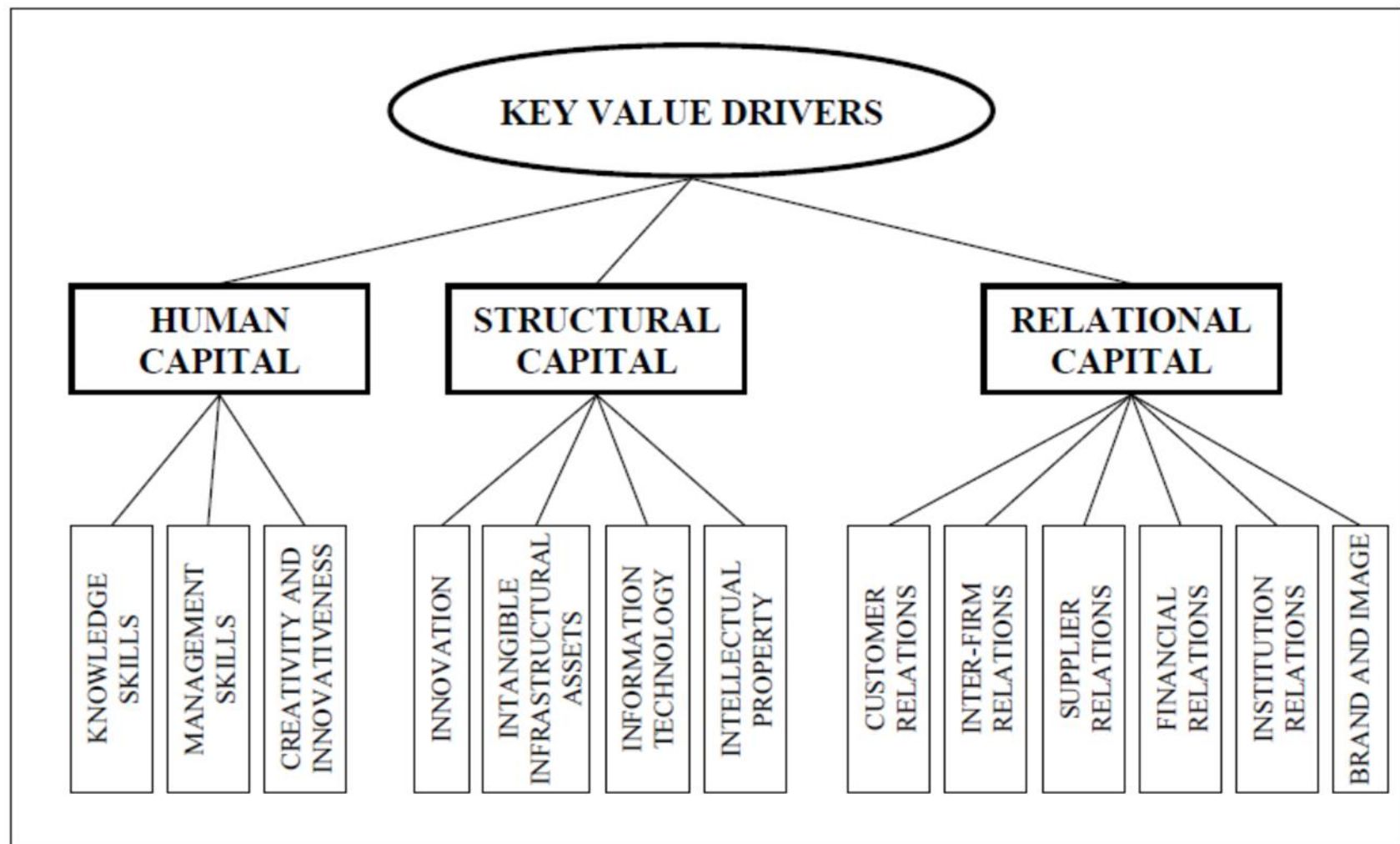
Mission of STISA 2024

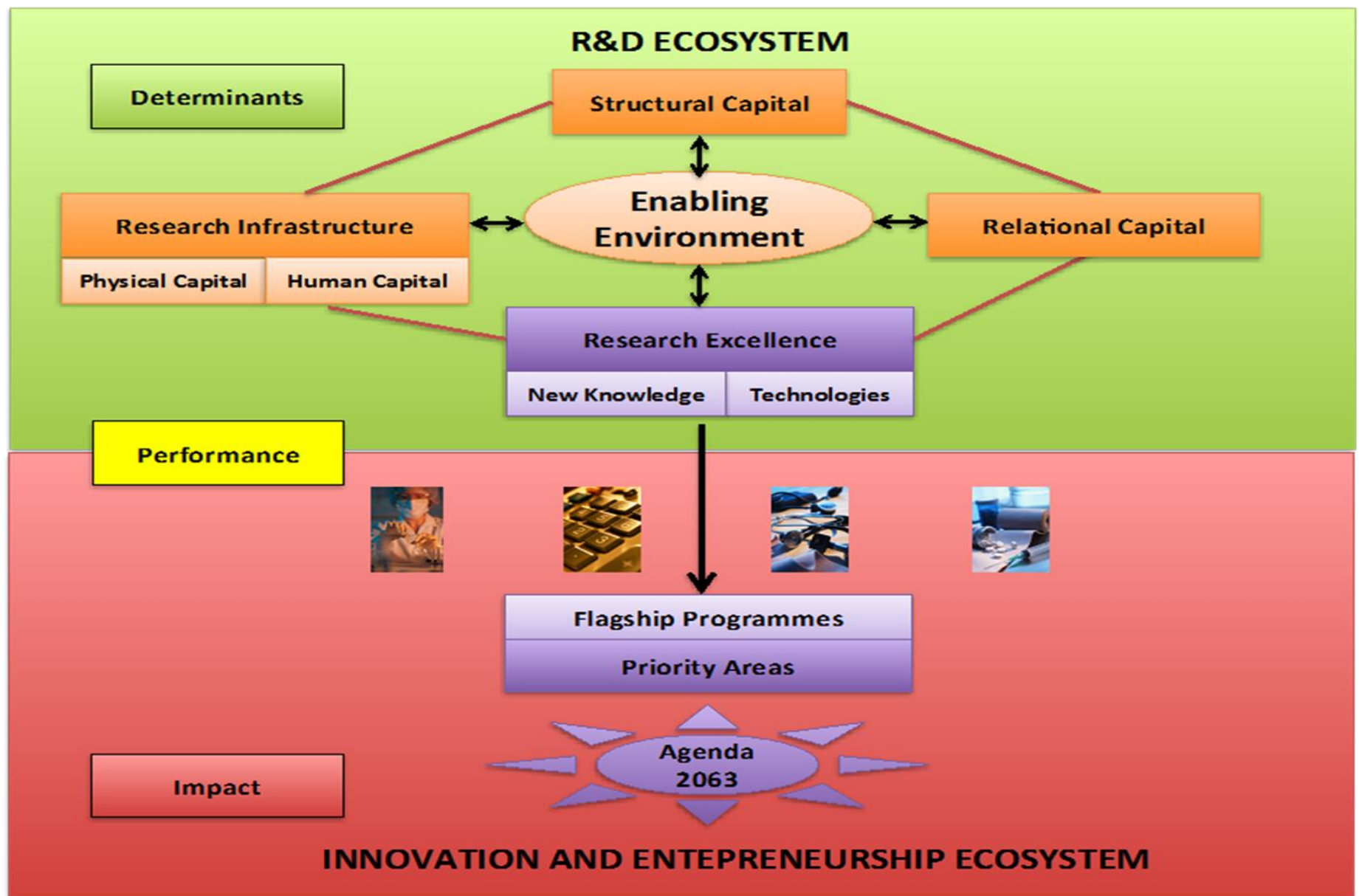
To accelerate Africa's transition to an innovation-led, knowledge-based economy





Ideas are Capital-The Rest is Money





Ideas are Capital-The Rest is Money



Interactions, Linkages, Cooperation and Partnerships Hold National Systems of Innovation

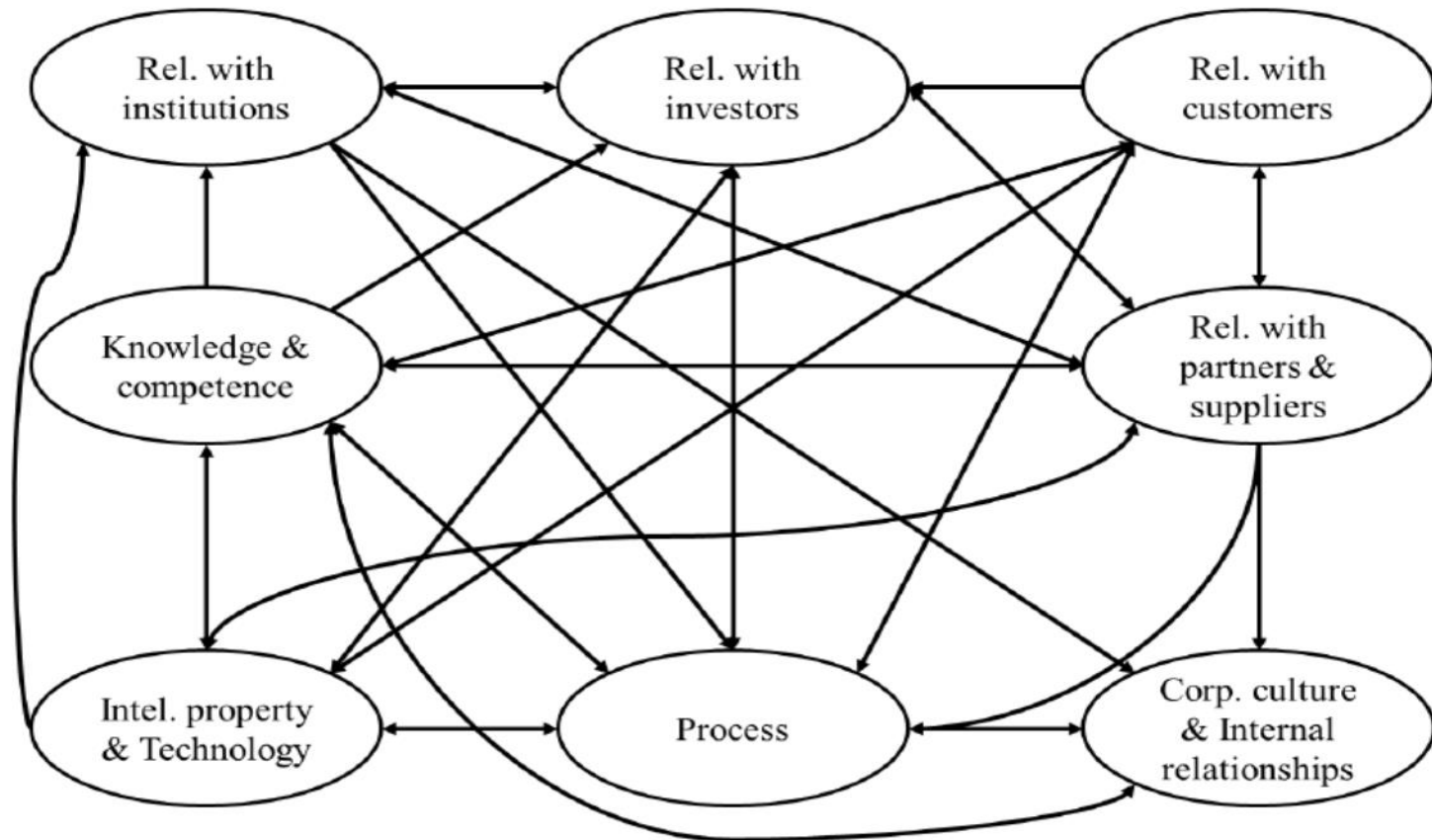
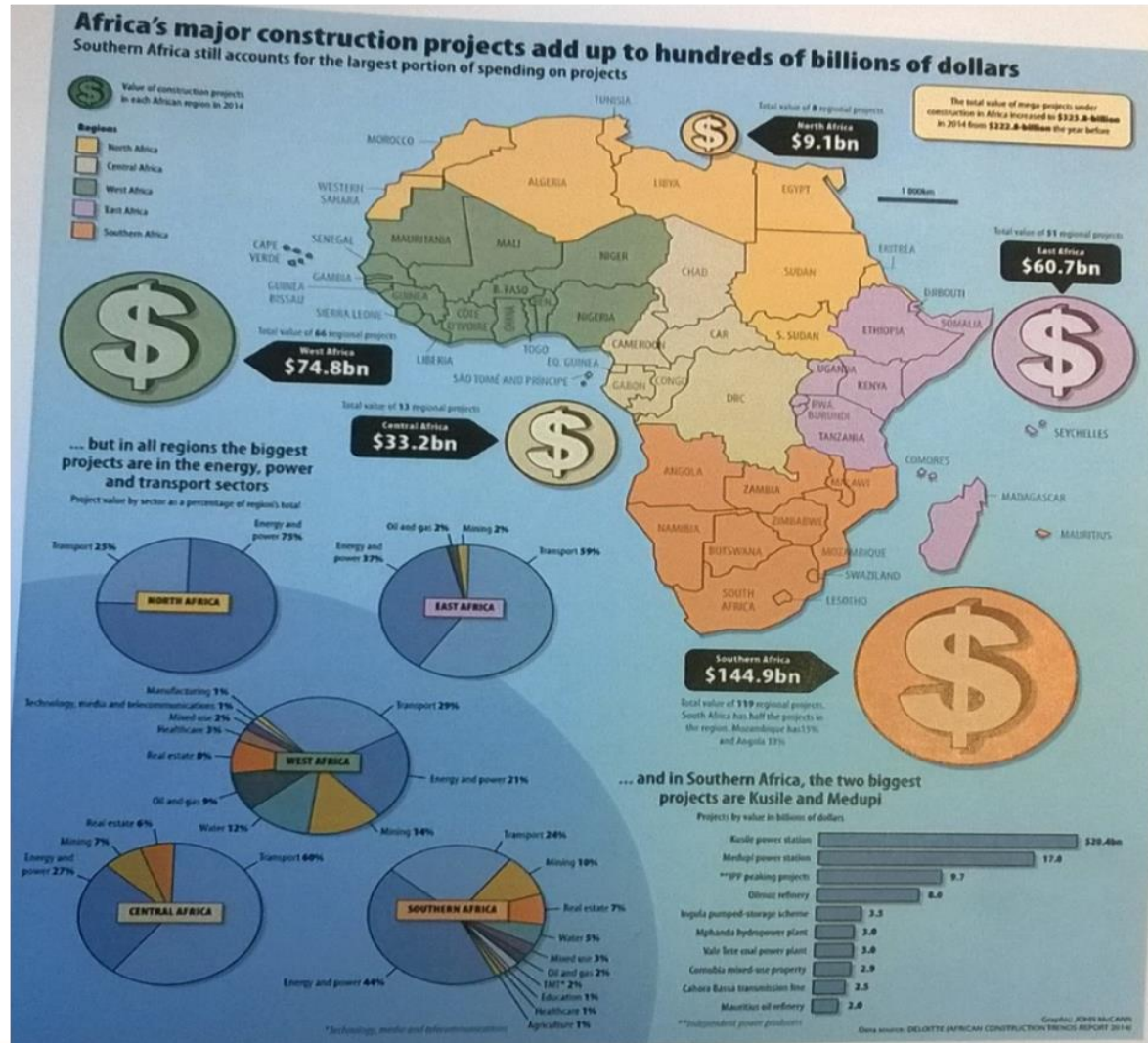


Figure 4 - The conceptual map of ICAs' interdependencies



Africa can take advantage of megaprojects at National



AUTHORS	HUMAN CAPITAL	STRUCTURAL CAPITAL	RELATIONAL CAPITAL	
Baum et al. (2000)	Employee relations	Innovation	Alliances	
		Quality	Customer relations	
		Technology	Brand value	
			Environmental and community issues	
			Customer relations	
Petty and Guthrie (2000)	Know-how	Intellectual Property (Patents, Copyrights, Trademarks)	Networking systems, Financial relations	
	Education	Infrastructure assets (Management philosophy, Corporate culture, Management processes, Information systems)	Brands, Company names	
	Vocational qualification, Work-related knowledge, Work-related competencies		Customers, Customer loyalty	
	Entrepreneurial spirit, Innovativeness, Proactive and reactive abilities, Changeability		Distribution channels	
			Business collaborations	
VanderKaay (2000)	People “live strategy”		Licensing agreements, Favourable contracts, Franchising agreements	
	Deliberately share knowledge, Learn from multiple sources		Brand image, Reputation	
FASB NN (2001)	Workforce	Technology	Customer empathy	
		Contract	Customers	
		Organization		Market
		Statutory-based assets		
Meritum (2002)	Innovation capacity, Creativity	Organisational routines, Procedures, Cultures	Investors	
	Know-how and previous experience	Organisational flexibility	Creditors	
	Teamwork capacity, Tolerance for ambiguity	Intellectual Property Rights	Customers, Set of customer profiles	
	Formal training and education	Information Technologies, Systems, Databases, Documentation service, Knowledge centre	Suppliers	
	Employee flexibility, Job rotation	Routines	Perceptions that stakeholders hold about the company	
	Motivation, Satisfaction, Learning capacity	Organisational learning		
	Loyalty			
Boedker, Guthrie, Cuganesan (2004)	Knowledge	Management philosophy, Organisational culture, Organisational structure,	Company name and Brands	
	Education/training, Learning and development	Service/product quality, Management processes	Alliances and partnerships, Licensing/franchising	
	Employee demographics	Information Systems	Customer relations	
	Work related competencies	Intellectual property, R&D	Supplier relations	
			Financial relations	
			Distribution channels	
			Favourable contracts	
Green (2004)	Employee, Human capital	Information	Community relations	
	Social intelligence, Leveraging competences	Process	Partner	
		Product/services	Market capital	
Green and Ryan (2005)	Employee	Technology, Leveraging technology, Enterprise intelligence	Customer intimacy	
		Process	Customer	
	Information	Product/Service	Competitor	
		Technology	Partner	

Marr (2008)	Knowledge and skills, Work-related experience, Competencies, Education	Organizational culture (Corporate values, Social capital, Management philosophy)	Social networks, Partnerships, Alliances
	Emotional intelligence	Process and routines (Formal processes, Tacit/informal routines, Management processes)	Brand image, trust, corporate reputation, Customer loyalty
	Vocational qualification, Employee engagement, Entrepreneurial spirit	Intellectual property (Brand names, Data and information, Codified knowledge, Patents/copyrights, Trade secrets)	Licensing agreements, Distribution agreements, Joint ventures
	Flexibility, Creativity		Royalty revenue, Contribution to licensee
	Formal relationship, Informal relationships		Brand value
	Employee loyalty, Employee satisfaction		Contribution to spin-off Customer satisfaction, Customer retention rate
Choong (2008)	Management skills, Human-centred assets, Employee competence	Infra-structured assets, Structural resources	Customer capital
	Experience, Identity of individual	Organizational practices, Culture, Strategy	Market assets, Advertising, Distributing
	Managerial work, Workforce	Start-up capital, Statutory-based assets, Location capital	Contracts, Payments on account
	Training Influencing behaviour		Consumer trust
Dumay (2009)		Effective lines of communication, Technology support processes, Technology supports customers	
		Performance in product-based, Innovative products, Product focused	
Karagiannis et al. (2009)	Employee	IT infrastructure	Customer-related data
	Training	Administration	Enterprise related data
	Competences classes	Research and development	Market-related data
	Human factor risk	Employee structure Structural factor risk	Relational factor risk
Kim and Kumar (2009)	Leadership, Commitment	Patent	
	Work attitude	HRM effectiveness	
	Patent per employee, Competence utilization	Vision planning capability, Organizational culture, Managerial efficiency, Participation in policy	
	Employee satisfaction, Standard contribution per man, Education satisfaction, Working years	Process effectiveness, Best practices	
	Training expenses per employee, Training hours per employee	Know-how for tech transfer, Number of new technology, Investment for new technology	
		Information system	
		Culture	
		Innovation	
Moeller (2009)	Human capital	Process	
		Innovation capital	Customer capital
		Process capital	Supplier capital
Vuolle et al. (2009)		Location capital	Investor capital
	Diversity of skills	Ideas, Systems and tools to support R&D	Customer input, Feedback from customers, Customer involvement
	Experience and education, Expertise	Management support, Commitment, Practices	Direct relationships, Collaborative R&D
	Creativity, Innovative behaviour	Organizational culture, Organizational structures Personal relationships, Cross-functional teams, Internal collaboration and projects	Projects with companies and institutions

Thank you

