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Evaluating Intellectual Assets – New and Improved Measures for the Transcendent Library

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Presentation outline

- Rationale for evaluating intangible assets
- Terminology, concepts and definitions
- Frameworks for assessing intellectual capital
- Applications in library and information services
 - conceptual papers
 - empirical studies
- Case study of university libraries in Thailand
- Concluding comments



The case for assessing intangibles

“The assessment of **intangible value added** will be key to developing a compelling story around our overall value proposition. The established threefold approach to the measurement of **knowledge/intangible assets** is likely to be a good starting point for recognizing areas for developing new measures or, in some cases, revitalizing older ones.”

(Town, 2011: 123)



Rationale for evaluating IC/IAs

- Raising awareness of organizational knowledge or collective memory within the organization
- Supporting appraisal of achievements in KM projects (e.g. knowledge transformation and sharing)
- Using information on intellectual assets for internal management purposes (e.g. strategic planning, decision making, operational control, work improvement)
- Enabling better alignment of organizational resources for operational efficiency and strategic effectiveness
- Communicating information to stakeholders to demonstrate organizational wealth

(Probst et al., 2000; Marr et al., 2003;
Mouritsen et al., 2004; White, 2007)



Terminology and concepts

- Different terms can be used for the same things
 - ‘intangible assets’, ‘intangibles’, ‘intellectual assets’, ‘intellectual capital’, ‘knowledge assets’ and ‘knowledge-based resources’
- Terms can also be given specific meanings
 - IC is the raw or tacit knowledge of individuals that has the potential to be articulated and converted into explicit knowledge and the IAs of an organization
- Intellectual assets is the term preferred in national and international official guidelines
 - e.g. EU (2002; 2006), OECD (2006), UN (2003)



Conceptual roots of IC





Characteristics of IC and IAs

“Intellectual capital is intellectual material – knowledge, information, intellectual property, experience – that can be put to use to create wealth” (Stewart, 1997: xx)

“Knowledge assets are the inputs, outputs and moderating factors of the knowledge-creating process”
(Nonaka et al., 2000: 20)

“An asset can be thought of as a prior cost that has a future benefit” (Snyder & Pierce, 2002: 469)

“IC can be both the end result of a knowledge transformation process and the knowledge itself that is transformed into intellectual property or assets”
(Snyder & Pierce, 2002: 475)

IAs are dynamic, context-specific, competitive resources



Categories of intellectual assets

- **Human resources [people assets]**
 - collective capabilities derived from individuals in firms, which include capacities, experience, motivation and staff satisfaction
- **Structural capital [organizational capital]**
 - organizational competence in the forms of databases, technology, routines and culture
- **Relational capital [customer capital]**
 - networks developed by organizations with customers, suppliers, partners and stakeholders

(OECD, 2006: 9)



IC management frameworks

Brooking (1996) Technology Broker	Sveiby (1997) Intangible Assets Monitor	Edvinsson & Malone (1997) Skandia Navigator		Kaplan & Norton (2004) Balanced Scorecard + Strategy Map
Intellectual property	Internal structure	Organizational capital	Innovation capital	Organization capital
Infrastructure assets			Process capital	Information capital
Market assets	External structure	Customer capital		[Customer perspective]
Human-centred assets	Professional competence	Human capital		Human capital



Objectives for intangible assets

- **Human capital**
 - Strategic competencies (skills, talent and know-how)
- **Information capital**
 - Strategic information (information systems, knowledge applications and infrastructure)
- **Organization capital**
 - Culture (shared mission, vision and values)
 - Leadership (at all levels of the organization)
 - Alignment (of goals and incentives with strategy)
 - Teamwork (sharing of knowledge and staff assets)

(Kaplan & Norton, 2004: 203)



Contents of an IC statement

- Knowledge narrative
 - outlines the value proposition including the aim of the organization's knowledge management
 - How do the products or services create value for users?
 - Which knowledge resources are critical to delivering value?
 - What is the particular nature of the product or service?
- Management challenges
 - a series of concrete activities related to the development of knowledge resources
 - involving staff, customers, processes and technologies
- Initiatives – formalise problems identified as challenges
- Indicators – report on initiatives (Mouritsen et al., 2005)



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Library applications of intellectual capital theory

Conceptual papers (1998–)

Empirical studies (1998–)



Examples of conceptual papers

- Introductions to the subject
 - Corrall, 1998; Koenig, 1998; Huotari & Iivonen, 2005; White 2007
- Adaptations of IC models to LIS organisations
 - Pierce & Snyder, 2003 (showing how the IAM could be used to evaluate library and information centres)
 - Van Deventer & Snyman, 2004 (proposing an IC measurement framework and questions for LIS derived from empirical work based on IAM and BSC)
 - Kostagiolas & Asonitis, 2009 (review of approaches to measurement with indicative IAs for academic LIS)



Examples of empirical studies

- Human resource accounting
 - auditing people assets at the British Library for consultancy services by questionnaire (Dakers, 1998)
- Learning organization
 - exploring individual, departmental and organizational learning at a university library (ARL member) by interviews and questionnaire (Fowler, 1998)
 - measuring performance of university library in Singapore against 15 characteristics of LOs by questionnaire and interviews (Tan & Higgins, 2002)
 - exploring processes of KM, OL and IM at uni library in Chile by document analysis, in-depth interviews and discourse analysis (Ahumado & Bustos, 2006)



Examples of empirical studies

- Intellectual capital reporting
 - action research using BSC and IAM at information service of SA research council (**Van Deventer, 2002**)
- Intellectual assets evaluation
 - establishing importance of 3 IC elements for Greek public library services by analytic hierarchy process with Delphi study (**Asonitis & Kostagiolas, 2010**)
 - case study of 3 university libraries in Thailand using document analysis, interviews and questionnaires (**Corrall & Sriborisutsakul, 2010**)
 - case study of Scholarship & Collections Directorate of BL using document analysis, in-depth interviews and questionnaires (**Schofield et al., in progress**)



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Evaluating intellectual assets in university libraries

A multi-site case study from Thailand
(Sriborisutsakul, 2010; Corral & Sriborisutsakul, 2010)



Case study context

- Libraries are under continuing pressure to demonstrate levels of activity, quality of service and value for money
- Libraries have adopted performance measures to fit the new digital environment and stakeholder expectations
 - e-metrics, user satisfaction and balanced scorecards
- Knowledge economy is pushing organisations towards KM initiatives as the way to create benefits for customers
- Work on KM/intellectual assets in libraries is limited
 - some conceptual papers and opinion pieces, but few empirical studies



Research questions

- How do Thai university libraries, as representatives of academic libraries, develop performance indicators to evaluate their organisational intellectual assets?
 - What are the most important **intellectual assets** for Thai academic libraries?
 - Why do library administrators want to evaluate their library intellectual assets, i.e. what are their **motives**?
 - How do libraries choose **performance indicators** as proxies to demonstrate their intellectual assets?
 - Which performance indicators are suitable, i.e. **practical** for evaluating library intellectual assets?



Theoretical framework – paradigms

- **Resource-based view (RBV)**
 - organisations realise that their knowledge base and intangible assets represent a **strategic resource**
 - such resources are characterised by **4 key features**: value, rarity, inimitability and non-substitutability
- **Intellectual capital (IC) perspective**
 - organisations regard their knowledge base and intangible assets as good **long-term investments**
 - these investments will enable them to **create value** in operations, products and services for stakeholders

(Barney, 1991; Meso & Smith, 2000; Stewart, 1997; Marr, 2005)



Theoretical framework – conceptual model

- **Scorecard process model**

- preferred approach to indicator development for reporting intellectual performance (basis of well-known official guidelines, e.g. European Union, Denmark, Japan)
- enables design of fit-for-purpose indicators via feedback loop (organisations revise or change measures after analysing causes and effects of previous assessments)
- **3 main steps**
 - ① Linking stakeholder expectations to **key success factors** (KSFs) relying on IA components
 - ② Building PIs based on KSFs to describe **qualitative targets** for knowledge resources
 - ③ Translating prospective indicators into **quantitative measures** of intangible stocks and learning activities

(Rylander *et al.*, 2000; Shulver *et al.*, 2000; Probst *et al.*, 2000)



Research methods

- **Mixed methodology:**
 - multi-phase exploratory sequential multi-site study, 'QUAL → Quan' (Creswell & Plano Clark, 2007)
 - **pilot** (1 university) + **main study** (3 universities), cases selected on size, readiness and interest in KM
 - **literature review** (management + library research)
 - **document analysis** (strategy and policy statements, annual reports, committee papers, QA documents)
 - **semi-structured interviews** (12 library administrators)
 - **questionnaire survey** (29 operational line managers)
 - **thematic analysis** (NVivo7) + **descriptive statistics**, cross-case comparison → theoretical propositions



Key findings

- The libraries all possessed knowledge-based items (IAs) and performed knowledge management-related activities that were vital to delivering future benefits
 - they all converged their human, structural and relational assets to create collection/service assets and innovations, fulfilling a similar knowledge assets role as intellectual property in firms
- Their main motives for evaluating intellectual assets were to monitor the progress of their KM projects and demonstrate value for stakeholders to gain their support
- A top-down process based on a simplified scorecard approach was an effective way of developing indicators
- Operational managers had more difficulty understanding indicators for relationship assets than other categories



Theoretical propositions

RQ1 asset identification, RQ2 evaluation motives

1. Organisational IAs of an academic library include not (RQ1) only its knowledge-based items or surrogates used as evidence of practical knowledge, but also its performance in creating, acquiring and exploiting IAs
2. Library IAs fall into 4 categories: human, structural, (RQ1) relationship, collection and service; the 4th combines outputs from the other 3 to create value for library users
3. Where KM projects have already been initiated, it is (RQ2) likely library managers will be interested in introducing IA evaluation to monitor and track KM project progress
4. A need to improve reports on the benefits of a library (RQ2) influences its managers to develop PIs for IAs to inform stakeholders about the intangible value of its activities



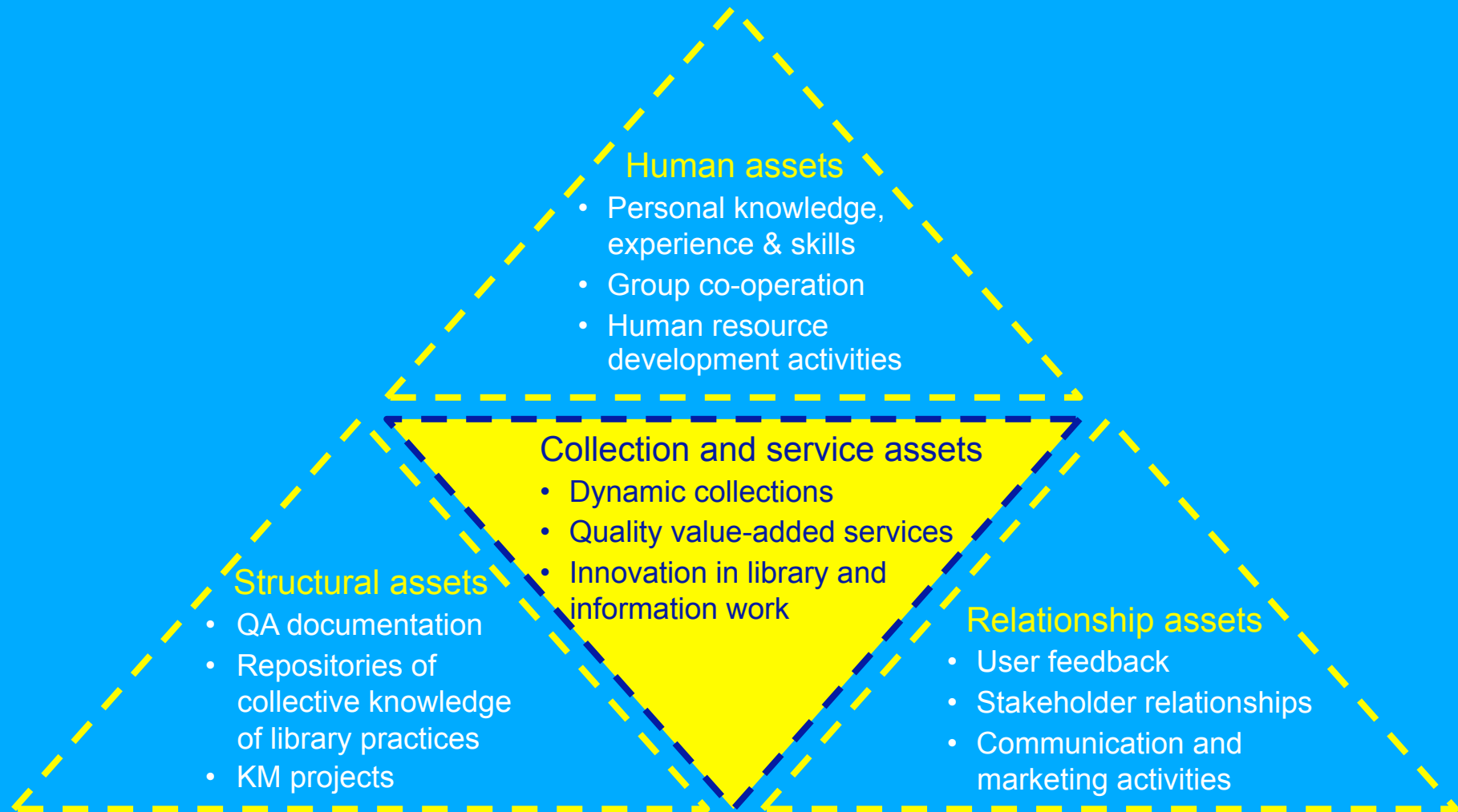
Theoretical propositions

RQ3 indicator attributes, RQ4 indicator practicality

5. Developing indicators for library intangibles starts with 5 (RQ3) KSF areas: people, market orientation, management practices, social networks and technology infrastructure
6. Efficiency, effectiveness, quality and stability are 4 focal (RQ3) dimensions for library intellectual performance criteria
7. Inputs, processes and outputs of library efforts to create (RQ3) value can be viewed as measurable surrogates for IAs
8. Developing PIs through the language currently used for (RQ4) evaluation facilitates understanding at operational level
9. Library managers at operational level tend to focus (RQ4) more on PIs for human and collection/service assets, rather than on PIs for structural and relationship assets



Proposed library IA classification



Revised conceptual framework

Identify library IAs by using existing evaluation tools as a steering model



Classify library IAs by their content

Human
assets

Structural
assets

Relationship
assets

Collection & services
assets



Consider prerequisites for starting up IA evaluation

Managerial purposes

Measurement viewpoints

Evaluation criteria

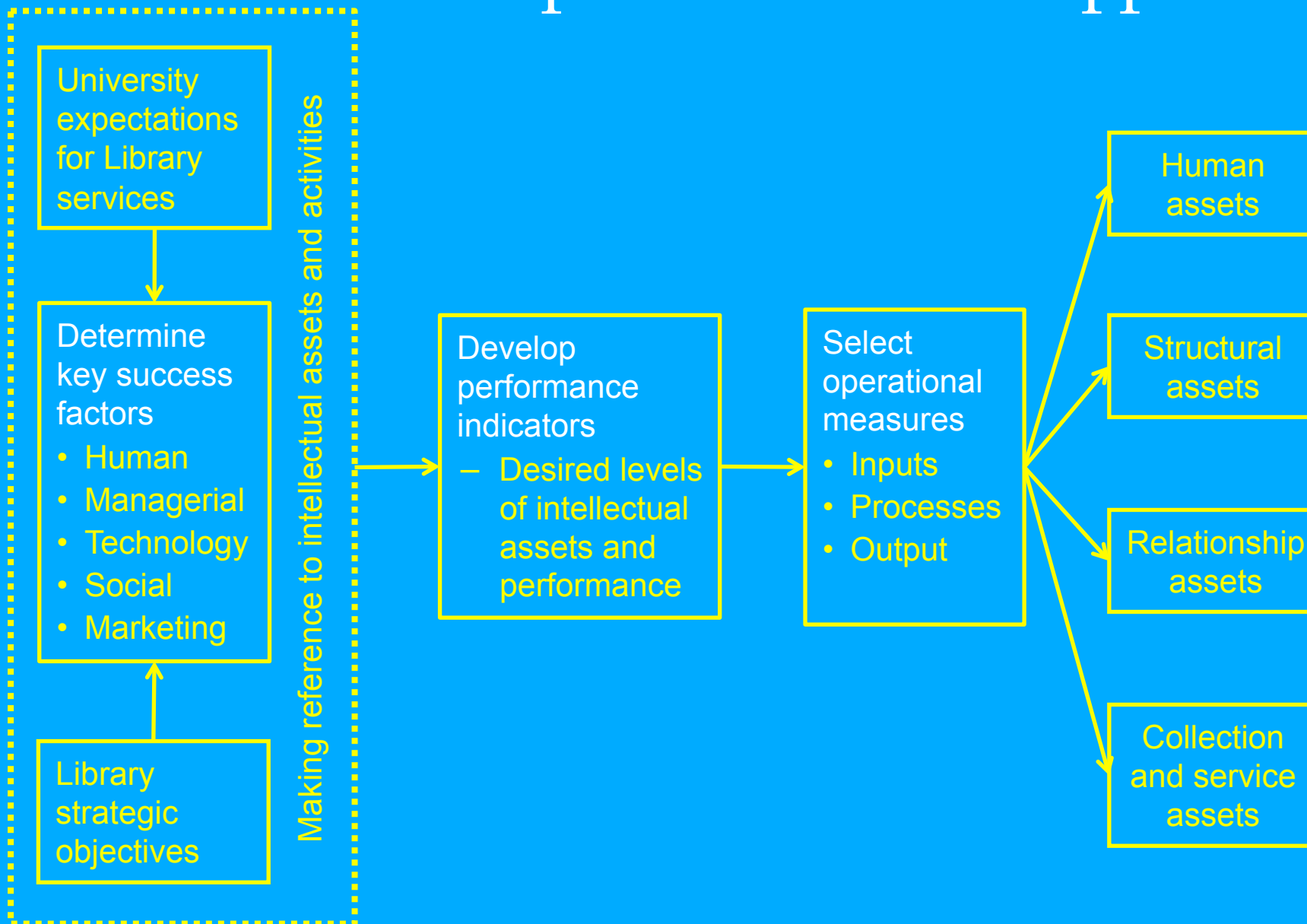


Use a simplified scorecard approach to develop PIs



Communicate an initial set of PIs, gain acceptance and implement

Simplified scorecard approach





Contributions of the study

- An in-depth empirical investigation of intangible indicator development in an academic library context
- An evidence-based practitioner-validated identification and four-fold classification of library intellectual assets
- Articulation of links between evaluation of library IA and existing management systems (strategy and measures)
- Proving the value of a comprehensive mixed-methods study for developing PIs for IAs specific to case contexts
- Giving library managers a better understanding of the strategic value of IAs and providing a conceptual model, practical guidance and insights into development of PIs



Key points

- Evaluating intellectual assets
 - helps us to focus our attention on the people who represent a big proportion of our financial investment
 - encourages us to take a holistic view of assessment as the interactions between assets are crucial to organizational efficiency and effectiveness
- Both qualitative and quantitative approaches can be used to suit institutional preferences
- We need more empirical work and reports!

Comments or questions?

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