



University of Pittsburgh

# Pitt School of Information Sciences

## Mobilizing Invisible Library Assets for Innovative Research Support in the 2020 Information Landscape

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# Research Environment Challenges

- Networked data-driven science, digital humanities, interdisciplinary research, and “grand challenges”
- Policy developments and funding body mandates – open access, data sharing, and research impact
- Evidence of unmet needs for research support (infrastructure, systems, tools, and expert help)
- Calls for libraries to change both what they offer and how they engage with the research process
  - Moving from “service-as-support” to partnership and “deep collaboration” across the knowledge creation cycle



# Theoretical Propositions

## Proposition 1

Research libraries gain strategic advantage by effective use and efficient accumulation of intangible resources that represent distinctive competencies, i.e., **Invisible Assets**.

## Proposition 2

Libraries can strengthen their resources by undertaking activities that require more than their current capabilities and stretch their invisible assets, i.e., **Overextension Strategy**.



# Theoretical Framework

- Resource-based view (RBV) of organizations
  - tangible and **intangible assets** are strategic resources whose value in terms of durability, rarity, inimitability, and non-substitutability represent competitive advantage
  - includes financial, physical, human, technological, reputational, and organizational resources

(Barney, 1991; Grant, 1991; Meso & Smith, 2000)
- Intellectual capital (IC) perspective
  - **human, structural, and customer/relational capital** are long-term investments enabling value creation for stakeholders, alongside other forms of capital, such as physical and monetary assets

(Marr, 2005; Stewart, 1997)



# Definitions

“Intellectual capital is intellectual material – **knowledge, information, intellectual property, experience** – that can be put to use to create wealth”

“sum of **everything everybody in a company knows** that gives it a competitive edge”

(Stewart, 1997, pp. ix-x)

“IC can be both the end result of a knowledge transformation process and the knowledge itself that is transformed into intellectual property or assets”

“An asset can be thought of as a prior cost that has a future benefit”

(Snyder & Pierce, 2002, pp. 469, 475)



# Terminology

- Different terms can be used for the same things, e.g.,
  - **intangible assets** (IAs), intangibles, intellectual assets, **intellectual capital**, invisible assets, hidden assets, knowledge assets, **knowledge-based resources**, knowledge capital...
- Some scholars give the terms more precise meanings and arrange them as a hierarchy of related concepts
- IC/IAs have three core characteristics
  - i) they are sources of probable future economic profits
  - ii) they lack physical substance
  - iii) to some extent, they can be retained and traded by a firm

(OECD, 2006, p. 9)



# Research Questions

## General questions

- RQ1. What human, organizational and relationship factors are associated with development of higher-end research services in research libraries?
- RQ2. To what extent are libraries blending and/or recycling intangible resources to create added value in the delivery of support for research?
- RQ3. What do current trends in library engagement with research suggest about future strategies for service innovation and growth?



# Data Sources and Methods

- Case study design enabled in-depth investigation of topic of interest in a real-world institutional context
- Institutions selected to represent different sizes and types within group of leading research universities
- Primary data sources included institutional documentation and semi-structured interviews
- Review of related literature used to form questions and to provide secondary data for comparison
- OECD (2008) classification of intangible assets used as pre-existing framework to analyze data





## Analytical Framework: OECD (2008) Classification of Intellectual Assets

Category	Brief description	Examples/keywords
Human capital	Knowledge, skills, and know-how that staff “take with them when they leave at night”	Innovation capacity, creativity, know-how, previous experience, teamwork capacity, employee flexibility, tolerance for ambiguity, motivation, satisfaction, learning capacity, loyalty, formal training, education.
Relational capital	External relations with customers, suppliers, and R&D partners	Stakeholder relations: image, customer loyalty, customer satisfaction, links with suppliers, commercial power, negotiating capacity with financial entities.
Structural capital	Knowledge that stays with the firm “after the staff leaves at night”	Organizational routines, procedures, systems, cultures, databases: organizational flexibility, documentation service, knowledge center, ICTs, organizational learning capacities.



## Findings on Human Assets @ Case Sites

- Expertise in collection development/archives administration transferred to repository management via redeployment
- Information organization/retrieval know-how and teaching/training abilities reused in the scholarly communication area
- Skills in reference interviewing applied to data-related issues
- Competency needs for specialist support not only technical, but also include generic managerial and (inter)personal skills (e.g., marketing, negotiation, collaboration, critical thinking)
- Knowledge of research and scholarship acquired by recruiting (non-LIS) PhDs for special projects and permanent positions
- Librarians need to think differently and gain new perspectives – and get used to “thinking like knowledge producers”



## Findings on Relational Assets @ Case Sites

- Professional networks used to benchmark service initiatives, gather/exchange information and identify good practices
- Trust and credibility built from from previous interactions exploited to develop effective relationships with researchers
- Cross-unit collaborations formed by university libraries with existing and new partners to develop research data services
  - computing services, research office, and compliance office
- Liaison librarians expected to have important on-the-ground roles “engaging the campus in conversation”
  - in relation to existing and emergent researcher support, e.g., repository services, data management, new metrics

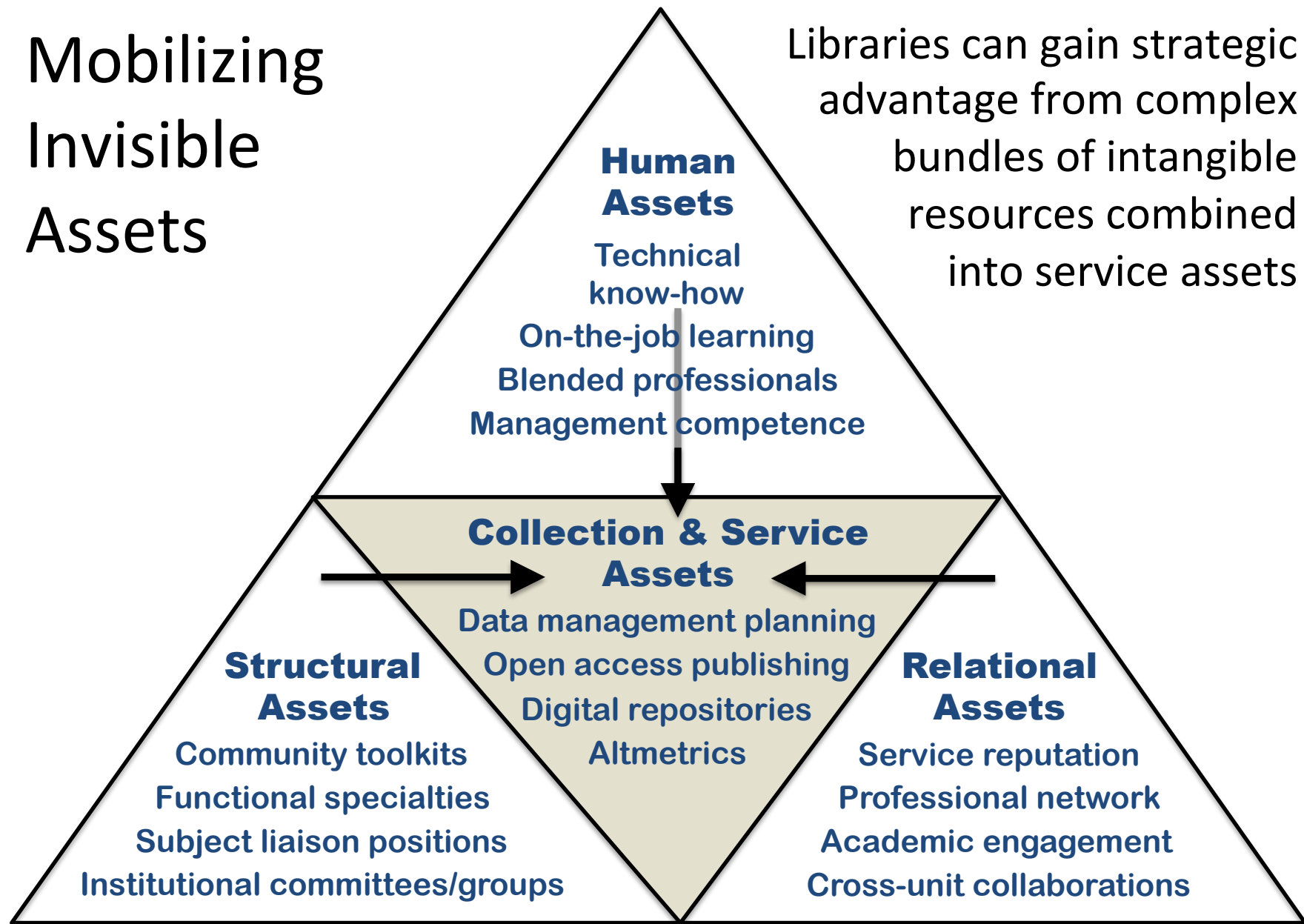


## Findings on Structural Assets @ Case Sites

- Institutional-level committees/groups endorsed library role in research process and provided sounding board for proposals
- No institutional mandates, but policy statements/resolutions on OA/RDM used to promote good practice to faculty
  - decentralized institutional structure/culture problematic
- Mixed hybrid structure of subject liaison librarians and (new) functional specialists used to provide subject-related support informed and guided by specialist expertise in key areas
  - research data services, scholarly communications
- Tools developed in the wider community deployed locally, e.g., bepress/EPrints, DMPTool, PKP Open Journals System

# Mobilizing Invisible Assets

Libraries can gain strategic advantage from complex bundles of intangible resources combined into service assets





# Invisible Assets as Strategic Resources

- Invisible assets are hard to accumulate, but are capable of simultaneous multiple uses, and are “dual resources”
  - Both inputs and outputs of business/service activities
- Libraries achieve *dynamic strategic fit* between ever-changing external and internal factors through the effective use and efficient accumulation of their invisible assets
- Successful strategies are dependent on invisible assets, which are also largely determined by the content of the strategies
  - Invisible assets affect and are in turn affected by strategies (positively and negatively)
  - Libraries may have to enter a new area of operation before they are completely ready to achieve their strategic design and thereby generate new assets for future use



# Mobilizing Invisible Assets

*“Overextend yourself, but don’t get reckless.”*

*(Itami, 1997, p. 132)*

- In a dynamic, technology-driven environment, libraries cannot afford to wait until they are completely ready to act
- Libraries have successfully used **learning-by-doing** strategies when developing pedagogical know-how needed to lead information literacy education across campus
- Capabilities gained from successfully supporting learning and teaching can be repurposed for research collaboration
  - Creating new **structures**, forming new **relationships**, and developing the research **know-how** needed to succeed



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Thank You!  
*Any Questions?*

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